



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R6–ES–2013–0068; 4500030114]

RIN 1018-AY56

Endangered and Threatened Wildlife and Plants; Revision of Critical Habitat for Salt Creek Tiger Beetle

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), revise the critical habitat designation for the Salt Creek tiger beetle (*Cicindela nevadica lincolniana*) under the Endangered Species Act of 1973, as amended (Act). In total, approximately 1,110 acres (ac) (449 hectares (ha)) in Lancaster and Saunders Counties, Nebraska, fall within the boundaries of our revised critical habitat designation. Publication of this final rule fulfills our obligations under a settlement agreement. The effect of this regulation is to

conserve the Salt Creek tiger beetle and its habitat under the Act.

DATES: This rule is effective on [**INSERT DATE 30 DAYS AFTER DATE OF
FEDERAL REGISTER PUBLICATION**].

ADDRESSES: This final rule is available on the Internet at <http://www.regulations.gov>, at <http://www.fws.gov/mountain-prairie/species/invertebrates/saltcreektiger/>, and at the Nebraska Ecological Services Field Office. Comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at <http://www.regulations.gov>. All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours at: U.S. Fish and Wildlife Service, Nebraska Ecological Services Field Office, 203 West Second Street, Federal Building, Grand Island, NE 68801; telephone 308–382–6468; facsimile 308–384–8835.

The coordinates or plot points or both from which the maps are generated are included in the administrative record for this critical habitat designation and are available at <http://www.regulations.gov> at Docket No. FWS–R6–ES–2013–0068, at <http://www.fws.gov/mountain-prairie/species/invertebrates/saltcreektiger/>, and at the Nebraska Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**). Any additional tools or supporting information that we developed for this critical habitat designation will also be available at the Fish and Wildlife Service website and Field Office set out above, and may also be included in the preamble and at

<http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Eliza Hines, Acting Field Supervisor, U.S. Fish and Wildlife Service, Nebraska Ecological Services Field Office, 203 West Second Street, Federal Building, Grand Island, NE 68801; telephone 308-382-6468; facsimile 308-384-8835. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. This document is a final rule to designate revised critical habitat for the endangered Salt Creek tiger beetle. This final rule fulfills the terms of a settlement agreement reached on June 7, 2011 (see **Previous Federal Actions**). Under the Endangered Species Act (Act), any species that is determined to be endangered or threatened requires critical habitat to be designated, to the maximum extent prudent and determinable. Designations and revisions of critical habitat can only be completed by issuing a rule.

The basis for our action. We listed the Salt Creek tiger beetle as an endangered species on October 6, 2005 (70 FR 58335), and we designated critical habitat for the subspecies on April 6, 2010 (75 FR 17466). On June 4, 2013, we published in the **Federal Register** a proposed revision to the critical habitat designation for the Salt Creek tiger beetle (78 FR 33282). Section 4(b)(2) of the Act states that the Secretary shall designate and make

revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. No areas have been excluded from the critical habitat designation.

This final rule will designate critical habitat for the endangered Salt Creek tiger beetle.

The critical habitat areas we are designating in this rule constitute our current best assessment of the areas that meet the definition of critical habitat for the Salt Creek tiger beetle. In total, we are designating 1,110 ac (449 ha) as critical habitat for the Salt Creek tiger beetle in Lancaster and Saunders Counties in Nebraska. This critical habitat designation includes saline wetlands and streams associated with Little Salt Creek and encompasses all three habitat areas occupied by the subspecies at the time of listing. It also includes saline wetlands and streams associated with Rock Creek and Oak Creek that are currently unoccupied, but supported the subspecies less than 20 years ago. Our designation also includes segments of Haines Branch Creek because this area has the potential to provide suitable habitat for the Salt Creek tiger beetle and its inclusion will reduce the risk of the subspecies' extinction by providing redundancy in available habitat throughout multiple creeks. Due to the presence of suitable habitat, we believe that the Salt Creek tiger beetle occurred in Haines Branch Creek historically; however, they have

not been documented in this location due to minimal survey effort relative to the annual surveys done at Little Salt, Rock, and Oak Creeks.

Peer review and public comment. We sought comments from appropriate and independent specialists to ensure that our designation is based on scientifically sound data and analyses. We obtained opinions from four knowledgeable individuals with scientific expertise to review our technical assumptions and analysis, and whether or not we had used the best available information. These peer reviewers supported the redundancy of habitat proposed for designation, but were concerned about the viability of existing Salt Creek tiger beetle populations, small size of units proposed for designation, and potential for the subspecies' recovery. Peer reviewers also provided additional information, clarifications, and suggestions to improve this final rule. Information we received from peer review is incorporated in this final revised designation. We also considered all comments and information we received from the public during both comment periods.

We prepared an economic analysis of the designation of critical habitat. In order to consider economic impacts, we prepared an analysis of the economic impacts of the critical habitat designation for the Salt Creek tiger beetle and related factors. We announced the availability of the draft economic analysis (DEA) in the **Federal Register** on March 13, 2014 (79 FR 14206), allowing the public to provide comments on our analysis. We have incorporated the comments and have completed the final economic analysis concurrently with this final determination.

Previous Federal Actions

The final rule to list the Salt Creek tiger beetle as endangered was published on October 6, 2005 (70 FR 58335). At that time, we stated that critical habitat was prudent and determinable; however, we did not designate critical habitat because we were in the process of identifying the physical and biological features essential to the conservation of the subspecies. We published a proposed rule to designate critical habitat on December 12, 2007 (72 FR 70716). On June 3, 2008, we published a notice in the **Federal Register** to reopen the comment period and announce a public hearing (73 FR 31665). On April 28, 2009, we published a revised proposed rule to designate critical habitat (74 FR 19167). A final rule designating approximately 1,933 ac (782 ha) of critical habitat was published on April 6, 2010 (75 FR 17466). The Center for Native Ecosystems, the Center for Biological Diversity, and the Xerces Society (plaintiffs) filed a complaint on February 23, 2011, regarding designation of critical habitat for the subspecies. The plaintiffs asserted that we failed to designate sufficient critical habitat to conserve and recover the subspecies. A settlement agreement between the plaintiffs and the Service was reached on June 7, 2011, and we agreed to reevaluate our designation of critical habitat. Accordingly, we published a proposed rule to revise the critical habitat designation for the Salt Creek tiger beetle on June 4, 2013 (78 FR 33282). On March 13, 2014, we published a document in the **Federal Register** (79 FR 14206) reopening the public comment period on the proposed rule to revise critical habitat for the Salt Creek tiger beetle and making available the draft economic analysis and draft environmental assessment for the action. This rule finalizes our revisions to the critical habitat

designation for the Salt Creek tiger beetle.

Background

It is our intent to discuss below only those topics directly relevant to revisions to the critical habitat designation for the Salt Creek tiger beetle. For more detailed information regarding the subspecies and the listing of the subspecies, refer to the final rule to list the subspecies as endangered published on October 6, 2005 (70 FR 58335).

Taxonomy and Subspecies Description

The Salt Creek tiger beetle (*Cicindela nevadica lincolniana*) is a subspecies in the class Insecta, order Coleoptera, and family Carabidae (Integrated Taxonomic Information System 2012, p. 1). At least 85 species of tiger beetles and more than 200 subspecies exist in the United States; 26 species and 6 subspecies are known from Nebraska (Carter 1989, p. 8). Tiger beetles are fast-moving, predaceous insects (Carter 1989, p. 9). The Salt Creek tiger beetle's average length is 0.4 inches (in) (10 millimeters (mm)), and its color is dark brown shading to green (Carter 1989, pp. 12 and 17).

Distribution, Abundance, and Trends

The Salt Creek tiger beetle is endemic to saline wetlands associated with the Salt Creek watershed and some of its tributaries in Lancaster and southern Saunders Counties

in eastern Nebraska (Allgeier 2005, p. 18). Historical estimates of the extent of these saline wetlands vary. Fowler (2012, p. 41) estimates that approximately 65,000 ac (26,000 ha) of saline wetlands occurred historically within the Salt Creek watershed. LaGrange et al. (2003, p. 3) estimated that more than 20,000 ac (8,100 ha) occurred historically. Farrar and Gersib (1991, p. 20) cite a report from 1862 that estimated there were 16,000 ac (6,480 ha) of saline wetlands in four basins near the present-day town of Lincoln. It is not clear which four basins they are describing, but these basins were likely only a portion of the entire eastern Nebraska saline wetland complex. Historically, the Salt Creek tiger beetle was probably widely distributed throughout the eastern saline wetlands of Nebraska, especially at the type locality of Capitol Beach (Allgeier 2005, p. 41) along Oak Creek. However, in the past 150 years, approximately 90 percent of these wetlands have been degraded or lost due to urbanization, agriculture, and drainage (LaGrange et al. 2003, p. 1; Allgeier 2005, p. 41).

The most complete recent inventory, conducted in 1992 and 1993, identified 3,244 ac (1,314 ha) of “Category 1” wetlands remaining in Lancaster and Saunders Counties (Gilbert and Stutheit 1994, p. 10). The authors define Category 1 wetlands as high-value saline wetlands or saline wetlands with the potential to be restored to high value (Gilbert and Stutheit 1994, p. 6). High-value wetlands were defined as meeting one or more of the following criteria: (1) The presence of Salt Creek tiger beetles; (2) the presence of one or more rare or restricted halophytes (salt-tolerant plants); (3) historical significance as identified by the Nebraska State Historical Society; (4) the presence of plants characteristic of saline wetlands and not highly degraded, or the potential for saline

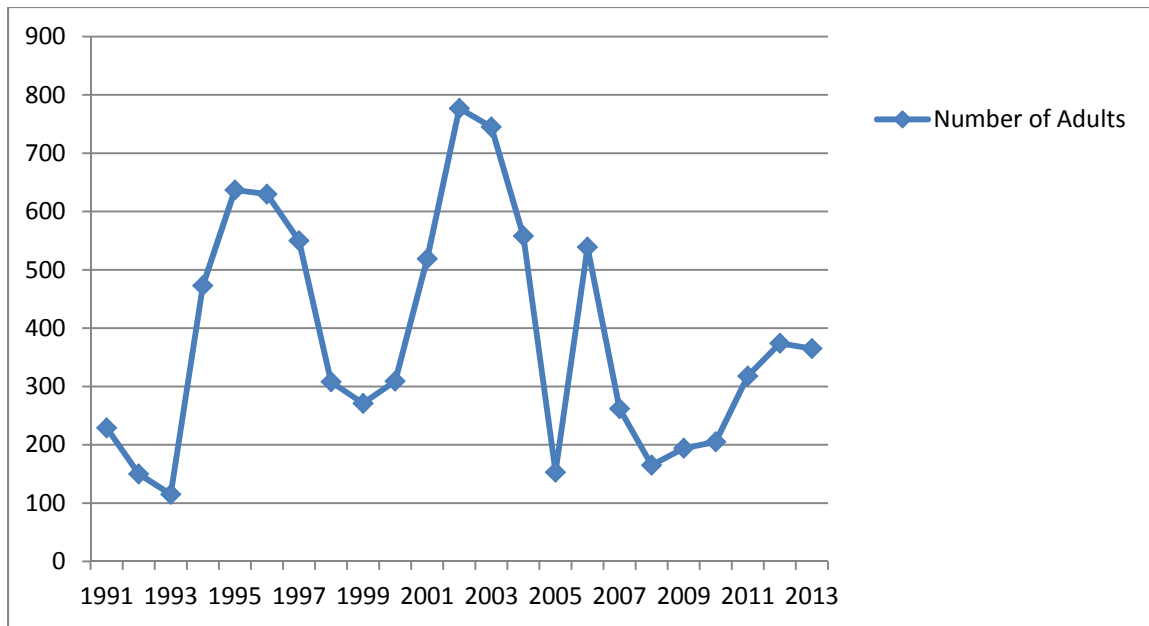
wetland characteristics after enhancement or restoration; and (5) high potential for restoration of the historical salt source. Other categories of wetlands described in the inventory, including Categories 2, 3, and 4, were thought to provide limited or no saline wetland functions. At that time, it was thought that these wetland types had little or no potential for reestablishing the salt source and hydrology needed to restore and maintain saline conditions (Gilbert and Stutheit 1994, p. 7). Since 1994, however, techniques involving removal of excess sediment and restoration of saline water through installation of wells has made restoration of Categories 1, 2, and 3 feasible. Removal of sediment has exposed saline seeps and restored Salt Creek tiger beetle habitat along Little Salt Creek to the extent that the subspecies now uses some of the restored areas (Harms 2013, pers. comm.). Category 2, 3, and 4 wetlands can also protect Category 1 saline wetlands from negative impacts associated with sediment transport and freshwater dilution of salinity. Without adjacent Category 2, 3, and 4 wetlands, Category 1 saline wetlands can degrade and cease providing saline wetland functions (USFWS 2005, p. 11; LaGrange 2005, pers. comm.; Stutheit 2005, pers. comm.). The Service completed a detailed assessment of wetlands prior to listing the Salt Creek tiger beetle in 2005, and concluded that, following years of degradation in the Salt Creek watershed, approximately 35 ac (14 ha) of barren salt flats and saline stream edges contain the entire habitat currently occupied by the Salt Creek tiger beetle, which is not sufficient to sustain the subspecies.

Visual surveys of Salt Creek tiger beetles, using consistent methods, timing, and intensity, have been conducted by University of Nebraska at Lincoln since 1991 (Spomer 2012a, pers. comm.). Over the past 22 years, the total number of Salt Creek tiger beetle

adults counted during visual surveys has ranged from 115 (in 1993) to 777 (in 2002) individuals (Figure 1). The most recent count was 365 adults in 2013. A 2-year mark-recapture study indicated that visual surveys may underestimate the subspecies' population by approximately 40–50 percent, and recommended that a 2X correction factor be applied (Allgeier et al. 2003, p. 6; Allgeier et al. 2004, p. 3; Allgeier 2005, p. 40). However, these mark-recapture efforts were conducted on a small population that may have experienced immigration or emigration during the sampling period; therefore, all assumptions may not have been met (Spomer 2012b, pers. comm.) and use of these results to make a population estimate may not be appropriate. Additionally, mark-recapture requires handling beetles and may interfere with egg-laying (Allgeier 2004, p. 3). Therefore, visual studies are preferred since they are more economical and less intrusive (Allgeier et al. 2003, p. 6; Allgeier et al. 2004, p. 3; Allgeier 2005, p. 53); however, visual studies do not provide the same precision as do mark-recapture studies.

Insects typically show greater population variability than many other animal species (Thomas 1990, p. 326), and their annual population numbers are generally cyclic. A very small population size indicates a vulnerability to extinction (Thomas 1990, pp. 325–326; Shaffer 1981, p. 131; Lande 1993, pp. 911–912; Primack 1998, p. 179) because when numbers decline, the population can become locally extirpated. The long-term data show a fluctuating, but very small population size for Salt Creek tiger beetles.

Figure 1. Adult Salt Creek tiger beetles counted during visual surveys 1991-2013 (Brosius 2010, p. 12; Spomer 2012b, entire).



In addition to the number of individuals, the number of populations is critical when considering distribution, abundance, and trends. Salt Creek tiger beetles have been located at 14 sites since surveys began in 1991 (Brosius 2010, p. 12). We consider these 14 sites to represent 6 different populations based upon documented dispersal distances and presence of discrete suitable habitat for the subspecies (70 FR 58336, October 6, 2005). Three of these populations have been extirpated since surveys began in 1991: The Capitol Beach population along Oak Creek, the Upper Little Salt Creek–South population on Little Salt Creek, and the Jack Sinn Wildlife Management Area (WMA) population on Rock Creek. For these populations, surveys showed that the number of individuals declined and then completely disappeared, leaving us to conclude that the population had become locally extirpated. The three remaining populations, Upper Little Salt Creek–North, Arbor Lake, and Little Salt Creek–Roper, all occur in the Little Salt Creek watershed, along a stream reach of approximately 7 miles (mi) (11 kilometers (km)) (Fowler 2012, p. 41).

Habitat

The Salt Creek tiger beetle has very specific habitat requirements. It occurs in remnant saline wetlands on exposed mudflats and along the banks of streams and seeps that contain salt deposits (Carter 1989, p. 17; Spomer and Higley 1993, p. 394; LaGrange et al. 2003, p. 4). Soil moisture and soil salinity are critically important in habitat selection (Allgeier et al. 2004, p. 6) for foraging, where the female lays eggs, and for larval habitat. The subspecies uses soil moisture and soil salinity to partition habitat between other collocated species of tiger beetles (Allgeier 2005, p. 64). Moist, saline, open flats are needed for thermoregulation, reproduction, and foraging.

Nebraska's eastern saline wetlands are maintained through groundwater discharge that originates in Pennsylvanian and/or Permian formations as it passes through a salt source likely located in north-central Kansas. This system occurs in the flood plains of Salt Creek and flows in a general pattern from southwest to northeast of Lincoln, Nebraska, in Lancaster and southern Saunders Counties (Harvey et al. 2007, p. 738). From the perspective of the larger Nebraska Eastern Saline Wetlands ecosystem, little is known about the connections between the surface water and the underlying groundwater and dissolved salts, or about the extent of the flow systems that feed the wetlands. From a local perspective, especially when making decisions about land management actions, it can be difficult to make informed management decisions about wetland protection or the impact of future development (Harvey et al. 2007, p. 738). However, the eastern saline

wetlands are dependent upon a regional-scale groundwater flow system and may not be replenished indefinitely (Harvey et al. 2007, p. 750). Subsurface geology, geomorphic features (including manmade features), and topographic characteristics all affect the hydrology of the wetlands, resulting in variability between each wetland (Kelly 2011, pp. 97–99).

Life History

The Salt Creek tiger beetle typically has a 2-year life cycle of egg, larval, and adult stages (Ratcliffe and Spomer 2002, unpaginated; Allgeier 2005, pp. 3–4). Adult females lay eggs in moist, saline mudflats along the banks of seeps and in saline wetland habitats when soil moisture and saline levels are appropriate. Upon hatching, each larva excavates a burrow where it lives for the next 2 years; the burrow is enlarged by the larva as it grows. Larvae are sedentary predators, catching prey that passes nearby. Larvae are more directly affected by a limited food supply than adults because they are not as mobile as adults and almost never leave their burrows. Following pupation, adults emerge from the burrows in the late spring to early summer of their second year and mate. Adults are typically active in May, June, and July before dying (Allgeier 2005, p. 63).

Adult Salt Creek tiger beetles have a mean dispersal distance of 137 feet (ft) (42 meters (m)) and a maximum dispersal of 1,506 ft (459 m), and most are recovered within 82 ft (25 m) of the marking location, based upon a study of 60 individuals (Allgeier 2005, p. 50) in which 24 individuals were relocated following capture and 36 were not. The

Salt Creek tiger beetle appears to have narrower habitat requirements for egg-laying, foraging, and thermoregulation than other tiger beetles found in Nebraska's eastern saline wetlands (Brosius 2010, p. 5).

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the Salt Creek tiger beetle during two comment periods. The first comment period associated with the publication of the proposed rule (78 FR 33282) opened on June 4, 2013, and closed on August 5, 2013. We also requested comments on the proposed critical habitat designation, associated draft economic analysis, and draft environmental assessment during a comment period that opened on March 13, 2014, and closed on March 28, 2014 (79 FR 14206). We did not receive any requests for a public hearing. We also contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed rule, draft economic analysis, and draft environmental assessment during these comment periods.

During the first comment period, we received eight comment letters addressing the proposed critical habitat designation. During the second comment period, we received nine comment letters addressing the proposed critical habitat designation, draft economic analysis, and draft environmental assessment. All substantive information provided during both comment periods has either been incorporated directly into this

final determination or is addressed below. Comments received were grouped into 32 general issues relating to the proposed critical habitat designation for the Salt Creek tiger beetle, and are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Review

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from four appropriate and independent individuals with scientific expertise that included familiarity with the subspecies, the geographic region in which the subspecies occurs, and conservation biology principles. We received responses from all four peer reviewers. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding critical habitat for the Salt Creek tiger beetle. The peer reviewers supported the addition of the Haines Branch and Oak Creek Units to the critical habitat designation to increase habitat redundancy, but expressed concern about whether these alone were sufficient to recover the Salt Creek tiger beetle. Concerns were raised as to whether populations of 500 individuals or fewer can remain viable over the long term. A peer reviewer also pointed out that the proposed rule does not protect and ensure the availability of saline groundwater.

Peer Reviewer Comments

(1) *Comment:* Multiple peer reviewers supported our proposal to designate critical habitat at the Haines Branch and Oak Creek Units for the benefit of habitat redundancy, thereby reducing the risk of subspecies' extinction.

Our Response: We determined that the addition of the Haines Branch and Oak Creek Units are essential to the conservation of the subspecies because they provide necessary habitat redundancy in the event of a negative environmental impact associated with Little Salt Creek, the only stream system that currently supports the Salt Creek tiger beetle.

(2) *Comment:* A peer reviewer pointed out that the four areas currently proposed probably represent the minimum amount of habitat needed for the subspecies to increase in abundance and distribution, but stated that these may not be enough to recover the subspecies.

Our Response: Our proposed designation of critical habitat, based on the best scientific and commercial data available, sought to identify the habitat needed to support the survival and recovery of the Salt Creek tiger beetle. Our final designation is over 31 times larger than the amount of habitat that is currently available for the Salt Creek tiger beetle and includes three additional currently unoccupied areas (Rock Creek, Oak Creek, and Haines Branch Units). For our analysis, we determined that six populations were the minimum number of populations needed to maintain the subspecies' viability and that each viable population needed at least 116 ac to meet life requisites. Thus, a total of 696 ac (116 ac x 6 populations) are needed to maintain the subspecies' viability. Our final

critical habitat acreage (1,110 ac) is 59 percent larger than this amount (696 ac), to ensure that we have delineated sufficient habitat for the subspecies to survive and recover. Populations will continue to be monitored on an annual basis to track status and trends over time.

(3) *Comment:* The peer reviewer stated concern about the reduction in the number of acres proposed from 1,933 to 1,110, pointing out that although redundancy was good, this reduction might negatively impact the net gain of adding additional units.

Our Response: In this final revised designation, we have targeted areas that are better able to support the subspecies. This designation includes saline seeps where the subspecies has actually been found along Rock, Little Salt, Oak, and Haines Branch Creeks. Additionally, a 137-foot (42 meter [m]) dispersal distance was extended outward on either side of these creeks to provide the Salt Creek tiger beetle with access to a vegetative mosaic around the salt flats located in the floodplain. The use of the 137 foot (42 m) dispersal distance outward from the creeks is the primary reason why the critical habitat acreage is less than our previous designation (1,933 acres) (782 hectares [ha]), which included large blocks of adjacent Category I saline wetlands. These large blocks of Category I saline wetlands cannot support the Salt Creek tiger beetle without habitat restoration. In addition, this revised designation better provides for conservation by including additional unoccupied habitat so that we can establish additional populations needed to improve the subspecies' redundancy and resiliency, two important factors in reducing extinction risk.

(4) *Comment:* A peer reviewer stated that there is uncertainty with regard to whether populations of 500 or fewer can remain viable over the long term although a

small population of tiger beetles can remain provided suitable habitat is available.

Our Response: Little is known about the minimal viable population size or the amount of habitat needed to sustain a viable population of Salt Creek tiger beetles. However, we have preliminarily determined that 500–1,000 adults is a reasonable estimate of a minimum viable population for the subspecies based on recovery plans for two other species of tiger beetles in the same genus (*Cicindela*) and surveys conducted for the Salt Creek tiger beetle since 1991. These plans consider a minimum viable population size to be at least 500–1,000 adults (Hill and Knisley 1993, p. 23; Hill and Knisley 1994, p. 31). The authors base this estimate on available literature and on preliminary observations of population stability at several sites, but acknowledge that there is little information available regarding the amount of habitat necessary to support a population of this size. We do know that Salt Creek tiger beetles can persist in relatively small areas provided that suitable habitat is available. Populations will continue to be monitored on an annual basis to track status and trends of the subspecies over time.

(5) *Comment:* A peer reviewer pointed out that the proposed rule still does not protect and ensure the availability of saline groundwater and guarantee the survival of the Salt Creek tiger beetle for all time.

Our Response: We acknowledge the importance of groundwater in creating and maintaining saline wetlands including saline seeps and barren salt flats. However, there is a high level of uncertainty with regard to the location of groundwater relative to the surface, flow pattern, interaction with surface water, and influence on saline wetlands and streams. Our designation of critical habitat is based on the presence and location of the primary constituent elements (PCEs), which are habitat features that are critical to the

survival and recovery of the Salt Creek tiger beetle. While we did not include groundwater itself as a PCE, groundwater contributes, in part, to the formation of the more specific habitat elements used by the Salt Creek tiger beetle, such as saline barrens and seeps found within saline wetland habitat. These more specific aspects of the species habitat are what we considered as the PCEs on which our critical habitat designation is based. Section 7 consultation under the Act (16 U.S.C. 1531 *et seq.*) does, however, provide a level of protection to groundwater by triggering consultation should it be determined that a federal action may affect groundwater to the extent that such impacts would result in the destruction or adverse modification of these PCEs. Additionally, there are other important recovery actions, including land acquisition and restoration projects, that are underway to help protect the saline wetlands. We believe that these actions and the designation of critical habitat collectively will act to protect the saline groundwater system for the benefit of the Salt Creek tiger beetle.

(6) *Comment:* Peer reviewers recommended further study on vegetative characteristics and wetland community classification, hydrologic research on Haines Branch and Oak Creek Units, and development of a plan to address light pollution.

Our Response: We are supportive of further research that would aid in the recovery of the Salt Creek tiger beetle and the saline wetland ecosystem. Our section 6 program continues to provide funding to the Nebraska Game and Parks Commission (Commission) for research on federally listed endangered and threatened species. This source of funding is available to fund these kinds of important projects through a competitive grant process. As far as how this information pertains to the critical habitat designation, the Act requires us to make determinations based on the best scientific and

commercial data available. It does not require additional studies, or that we wait until we have all the information that we would like to have. This rule is based on the best available information that we had at the time we made the decision.

Comments from the State

Comments we received from the Commission, Nebraska Department of Roads (NDOR), Nebraska Military Department (NMD), and Nebraska Department of Environmental Quality (NDEQ) regarding the proposal to designate critical habitat for the Salt Creek tiger beetle are addressed below.

(7) *Comment:* The Commission does not consider the proposed designation of 1,110 ac of critical habitat for the Salt Creek tiger beetle to be adequate for the conservation of the subspecies, and it is insufficient to maintain populations. The Commission stated that the approach used by the Service to prepare the proposed rule minimizes the amount of area designated as critical habitat rather than designating what is needed to conserve and sustain the subspecies. The Commission suggested that an adequate critical habitat designation would include all Category I saline wetlands and a 1,500 foot (457 m) zone to ensure the interconnection of ground and surface water flows and facilitate dispersal capabilities of the Salt Creek tiger beetle.

Our Response: Our designation of critical habitat identifies the habitat needed to support the survival and recovery of the Salt Creek tiger beetle. In this final revised designation, we have targeted areas that are better able to support the subspecies. This designation includes saline seeps where the subspecies has actually been found along

Rock, Little Salt, Oak, and Haines Branch Creeks. Additionally, a 137-foot (42 meter [m]) dispersal distance was extended outward on either side of these creeks to provide the Salt Creek tiger beetle with access to a vegetative mosaic around the salt flats located in the floodplain. A designation as large as the one the Commission suggests would include a substantial amount of habitat that is currently unsuitable for the species without restoration. Our final designation is more than 31 times larger than the amount of habitat that is currently available for the Salt Creek tiger beetle and includes three additional unoccupied areas (Rock Creek, Oak Creek, and Haines Branch Units). For our analysis, we determined that six populations were the minimum number of populations needed to maintain the subspecies' viability and that each viable population needed at least 116 ac to meet life requisites. Thus, a total of 696 ac (116 ac x 6 populations) is needed to maintain the subspecies' viability. Our final critical habitat acreage (1,110 ac) is 59 percent larger than this amount (696 ac), to ensure that we have delineated sufficient habitat for the subspecies to survive and recover. Populations will continue to be monitored on an annual basis to track status and trends over time.

(8) *Comment:* The Commission stated that an unsubstantiated process that has no scientific basis was used by the Service to calculate the area needed for critical habitat. The Commission further stated that the supposition by the Service that 153 Salt Creek tiger beetles occurring on 35 acres is a viable population and that amount of habitat can be used for calculating critical habitat requirements is indefensible.

Our Response: We do not assume that 153 Salt Creek tiger beetles on 35 acres is a viable population, and we discuss the process used to determine the acreage needed in the Population Spatial Needs section of this rule. As we noted previously, little is known

about the minimal population size or the amount of habitat needed to sustain a viable population of Salt Creek tiger beetles. However, general estimates of a minimum viable wildlife population typically range from 500–1,000 individuals (Shaffer 1981, p. 133; Thomas 1990, p. 325). We used the estimate of 153 adult beetles (the minimum population of Salt Creek tiger beetles counted over the past 10 years) as a starting point, and assumed that at least 3.3 times that number would be needed to achieve a single viable population, with at least six populations needed to maintain the subspecies' viability. We further estimated that if those 153 beetles occupied approximately 35 acres of habitat, it was reasonable to assume that 3.3 times as many beetles would require approximately 3.3 times as much habitat (116 acres) to support a single viable population, and 696 acres would support six populations. If the higher estimate (1,000 adult beetles) is used, similar calculations would conclude that approximately 232 ac would be needed to support a single viable population, and 1,392 ac would be needed to support six populations. Therefore, approximately 696–1,392 ac would sustain the viability of Salt Creek tiger beetles. Consequently, we believe that the designation of 1,110 ac of critical habitat is a reasonable estimate of the amount of habitat essential for the subspecies. We acknowledge the assumptions and uncertainties associated with our estimates; however, in the absence of better information we conclude that this is a reasonable approach.

(9) *Comment:* The Commission questioned the assumption used by the Service that just because the area is occupied it can also sustain a population over the long term. The Commission pointed out that three of six known populations have disappeared already and that numbers of individuals are on a general decline within those three

populations as an indication that the population is not sustaining itself. Further, the existing populations still face the same threats of habitat loss and degradation.

Our Response: Our designation of critical habitat for the Salt Creek tiger beetle is based on the best scientific and commercial data available. We acknowledge that there is uncertainty about whether the existing populations can be maintained. However, the areas included in our final designation constitute the best remaining Salt Creek tiger beetle habitat in existence. We are aware of no areas that would be better or more capable of supporting Salt Creek tiger beetles. We agree with the Commission that the 35 acres that are currently occupied by the Salt Creek tiger beetle are insufficient to sustain and recover the subspecies. For this reason, we are designating an additional 249 acres of critical habitat on Little Salt Creek. Populations will continue to be monitored on an annual basis to track status and trends of the subspecies, and future adjustments in the amount of habitat protected may be necessary.

(10) *Comment:* The Commission stated that the occupied habitat currently proposed by the Service for designation is at high risk and marginal, and will not sustain the Salt Creek tiger beetle over the long term. The Commission stated that the habitat proposed for designation occurs on steep slopes along stream banks and can be easily eroded and overcovered following bank sloughing that buries larval burrows. Prey is likely not as abundant in these locations given the sloping bank and potential inability of larvae to capture prey in sufficient quantities.

Our Response: The habitat included in our final designation constitutes the best available remaining habitat for the subspecies. As described in our rule to list the subspecies, habitat for the Salt Creek tiger beetle has been lost and severely degraded by

commercial, residential, and infrastructure developments leading to intrusion of excess freshwater and dilution of salinity and channelization and bank armoring projects resulting in entrenchment of saline streams and loss of saline wetlands through hydrologic modification. This large-scale habitat loss and degradation led to our decision to list the subspecies. Although the remaining habitat is degraded, it constitutes the best Salt Creek tiger beetle habitat remaining. We agree with the Commission that 35 acres that are currently occupied by the Salt Creek tiger beetle are insufficient to sustain and recover the subspecies. For this reason, we are designating an additional 249 acres of critical habitat on Little Salt Creek. We recognize that habitat used by the Salt Creek tiger beetle along Little Salt Creek beetle is at high risk due to over-covering by bank sloughing and bank erosion, which scours away developing larvae. We hope that the listing and critical habitat designation will facilitate better conservation and recovery of the subspecies and its habitat.

(11) *Comment:* The Commission expressed concern that the small areas of habitat proposed for designation by the Service would result in a loss of population resilience due to amplified effects of limiting factors including drought, prey reduction, interspecific competition, parasitism, and predation risk on a small population of Salt Creek tiger beetles.

Our Response: In this final designation, we have targeted areas that are better able to support the subspecies. We have determined that the 35 acres that are currently occupied by the Salt Creek tiger beetle are insufficient to sustain the subspecies. For this reason, we are designating an additional 249 acres of critical habitat on Little Salt Creek, which should lead to population expansion and increased resiliency. In addition, this

designation better provides for conservation by including additional unoccupied habitat so that we can establish additional populations needed to improve the subspecies' redundancy and resiliency, two important factors in reducing extinction risk. This subspecies' vulnerability to threats is part of the reason that the subspecies is listed as endangered.

(12) *Comment:* The Commission pointed out that the language "limited to its range" as stated in the proposed rule is not in the definition of critical habitat and introduces criteria not specified in the definition that would result in reducing the acreage proposed for critical habitat. The Commission indicated that the inclusion of this provision ignores a primary habitat component that is required to protect critical habitat for the Salt Creek tiger beetle, namely areas that are adjacent to Salt Creek tiger beetle habitat that are hydrologically connected and upon which occupied habitat is dependent for maintaining populations of the subspecies, even if it is not present at these areas. The Commission recommends that hydrologically connected areas that are adjacent to the areas under the current proposal be included because they meet the definition of critical habitat and they are essential for the conservation of the subspecies under the Act even though the Salt Creek tiger beetle may not be found in these areas.

Our Response: In our designation of critical habitat for the Salt Creek tiger beetle, we used a two-pronged approach to designate areas that are essential for the survival and recovery of the subspecies. Under the first prong, areas within the geographical area occupied by the (sub)species at the time it was listed are included in a critical habitat designation if they contain the physical and biological features (1) which are essential to the conservation of the (sub)species and (2) which may require special

management considerations or protection. Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the (sub)species at the time it is listed, upon a determination that such areas are essential for the conservation of the (sub)species. We designate critical habitat in areas outside the geographical area occupied by the species only when a designation limited to its range would be inadequate to ensure the conservation of the species. We concluded that the designation of the Little Salt Creek Unit alone would be inadequate to ensure the conservation of the Salt Creek tiger beetle. As such, our designation also included the Oak, Rock, and Haines Branch Creek Units.

In order to include surrounding vegetative areas that provide essential resources and support functions to the subspecies, we delineated areas on segments of the four creeks that extended 137 ft (the average known dispersal distance for the subspecies) on either side of the stream course. We used 137 ft because it is the average distance that the Salt Creek tiger beetle can move to meet life-history requisites which can be satisfied within the stream segment and adjacent saline barrens and seeps in the floodplain area. We concluded that this distance would provide the subspecies with sufficient prey resources. Additionally, we have included sufficient occupied and unoccupied habitat to contribute to the recovery the Salt Creek tiger beetle. We have included 826 acres of unoccupied areas because we determined that they are essential for the conservation of the subspecies. We believe that this amount is a reasonable amount of area to provide habitat for an additional 1,500 beetles in the future.

Our designation of critical habitat for the Salt Creek tiger beetle must be based on the best scientific and commercial data available. There are other important recovery

actions, including land acquisition and restoration projects, underway in the saline wetlands. We believe that these actions combined with our designation of critical habitat will act in concert to protect the saline groundwater system for the benefit of the Salt Creek tiger beetle.

(13) *Comment:* The Commission stated that the use of the 137-foot buffer around Salt Creek tiger beetle habitat by the Service was inadequate based on research conducted on documented movement patterns showing that the subspecies can move up to 0.25-mile. They also pointed out that a 137-foot buffer is unrelated to protection of the saline system, which maintains subspecies' habitat through the complex interaction of ground and surface water.

Our Response: We chose to use a mean dispersal distance of 137 feet because it is an average distance, a scientifically accepted way of accounting for outliers in the data, and based on the best scientific and commercial data available. The use of a 137-foot dispersal distance was based on a study done by Allgeier (2005, pp. 50-52) where 60 marked Salt Creek tiger beetles were released at five locations. Of those, 24 were recaptured with a mean dispersal distance of 137 feet (42 m) and a standard error of 21.58. Most individually-marked beetles were recaptured within 25 m of the location from where they were first captured and marked. Only three of the 24 beetles recovered were found at farther distances; one was recaptured 1,506 feet (459 m) away and two were recaptured 1,312 feet (400 m) away from where they were first captured and marked. Our use of a 137-foot buffer on either side of the streams designated as critical habitat is not intended to address protection of the complex interactions between surface and groundwater, which are important for maintaining saline wetland habitat for the Salt

Creek tiger beetle. We used 137 ft because it is the average distance that the Salt Creek tiger beetle can move to meet lifehistory requisites, which can be satisfied within the stream segment and adjacent saline barrens and seeps in the floodplain area while minimizing the inclusion of unsuitable habitat areas. We also concluded that this distance would provide the subspecies with sufficient prey resources.

(14) *Comment:* The Commission recommends that all Category 1 saline wetlands be designated as critical habitat and that a 1,500-foot buffer encompass these sites to protect the saline wetland/surface and groundwater interaction and to address movement capabilities of the Salt Creek tiger beetle to ensure dispersal among saline habitats.

Our Response: We appreciate the recommendation and the Commission's commitment toward the recovery of the Salt Creek tiger beetle and the saline wetland ecosystem on which it depends. However, our designation of critical habitat focuses on the PCEs essential to the conservation of the Salt Creek tiger beetle. These PCEs are primarily located along Rock, Little Salt, Oak Creek, and Haines Branch Creeks, but in many cases are in locations lacking in adjacent saline wetlands. For this reason, we do not designate all the Category I saline wetlands because they lack the necessary PCEs. Thus, our designation represents the habitat needed to support the conservation of the Salt Creek tiger beetle and is based on the best scientific and commercial data available.

(15) *Comment:* The NDOR inquired if the proposed critical habitat designation includes the road and highway rights-of-way or the toe slopes that would fall within the right-of-way boundary.

Our Response: This revised critical habitat designation is for areas that have the primary constituent elements (PCEs) required by the Salt Creek tiger beetle and that

require special management considerations and protection. As such, critical habitat does not include roads, road shoulders, road toe slopes, and other paved areas, but could include lands within a highway right-of-way beyond the aforementioned structures if those lands contain the primary constituent elements. Additionally, a federal action involving roads, road shoulders, road toe slopes, and other paved areas will not trigger section 7 consultation with respect to critical habitat unless the specific action would affect the physical or biological features in the adjacent critical habitat.

(16) *Comment:* The NDOR commented that the acreage and ownership percentages are reversed in the table between City of Lincoln and NDOR for the Oak Creek Unit.

Our Response: The table was modified to reflect the correct acreage and ownership.

(17) *Comment:* The NMD commented about potential restrictions at their Lincoln Airbase due to the proposed designation of critical habitat for the Salt Creek tiger beetle. These concerns included potential restrictions on type of aircraft (rotary or fixed winged), landing and departure areas, and flight path due to the proposed critical habitat designation.

Our Response: The NMD's Lincoln Airbase is not located within the boundaries of the critical habitat designation. As such, we do not anticipate recommending any potential restrictions on aircraft type, landing and departure areas, and/or flight path given that the distance between NMD property boundaries and the large salt flat within the Oak Creek Unit exceeds 0.65 mile, a distance exceeding the flight capacity of the Salt Creek tiger beetle. We are unaware of any research on the Salt Creek tiger beetle or any other

tiger beetle that would support such modifications.

(18) *Comment:* The NMD commented that the proposed critical habitat designation may result in restrictions to routine maintenance and repair of the Lincoln Airbase in terms of requiring modifications to lighting, mowing, water runoff or drainage, fence repair, road repair, and replacement.

Our Response: The NMD's Lincoln Airbase is not located within the boundaries of the critical habitat designation. As such, we do not anticipate recommending any potential restrictions on the routine maintenance and repair activities that occur at the Lincoln Airbase given that the distance between NMD property boundaries and the large salt flat within the Oak Creek Unit exceeds 0.65 mile, a distance exceeding the flight capacity of the Salt Creek tiger beetle. Additionally, the presence of Oak Creek creates a protective boundary around the Oak Creek Unit, thereby preventing runoff and other drainage from entering the Oak Creek Unit.

(19) *Comment:* The NMD expressed concern that the Salt Creek tiger beetle would migrate on to the Lincoln Airbase from the Oak Creek Unit.

Our Response: The Salt Creek tiger beetle has very narrow habitat preferences and would not migrate on to the Lincoln Airbase where such habitat is unavailable.

(20) *Comment:* The NMD expressed concern about the potential for a future increase in the critical habitat designation within the Oak Creek Unit.

Our Response: Our critical habitat designation is based on a targeted identification of primary constituent elements which comprise suitable habitat for the Salt Creek tiger beetle. Our analysis showed that none of the primary constituent elements are present on the Lincoln Airbase and are not likely to exist there in the future. As such,

we would not expand our critical habitat designation to that area in the future.

(21) *Comment:* The NDEQ pointed out that the designation of critical habitat for the Salt Creek tiger beetle might prohibit new and expanded discharges from wastewater treatment facilities, municipal separate storm sewer system, and water treatment plants that are located upstream from the critical habitat units on Rock, Little Salt, Oak, and Haines Branch Creeks. The NDEQ suggested further dialogue with the Service on how to implement their responsibilities under the Clean Water Act without requiring additional unneeded infrastructure and expenditures by those entities holding permits for these discharges.

Our Response: The Service has engaged in and will continue to maintain a dialogue with NDEQ about these various forms of discharges. We note that prohibitions against new and expanded discharges by NDEQ to protect the Salt Creek tiger beetle may not be necessary depending on their volume and timing.

Public Comments

(22) *Comment:* The proposed revised designation of only 1,110 ac of critical habitat for the Salt Creek tiger beetle is inadequate to ensure the survival and recovery of the subspecies. The Service should err on the side of the subspecies and include any potential saline wetland habitat in the proposed critical habitat.

Our Response: We believe that our designation of critical habitat is the amount of habitat needed to support the survival and recovery of the Salt Creek tiger beetle and is based on the best scientific and commercial data available. We have determined that the

35 acres currently occupied by the Salt Creek tiger beetle is insufficient to sustain the subspecies. We are designating an additional 249 acres of critical habitat on Little Salt Creek, plus three additional unoccupied units, which should lead to population expansion and resiliency. In this final revised designation, we have targeted areas that are better able to support the subspecies. This designation includes saline seeps where the subspecies has actually been found along Rock, Little Salt, Oak, and Haines Branch Creeks. Additionally, a 137-foot (42 meter [m]) dispersal distance was extended outward on either side of these creeks to provide the Salt Creek tiger beetle with access to a vegetative mosaic around the salt flats located in the floodplain. The use of the 137 foot (42 m) dispersal distance outward from the creeks is the primary reason why the critical habitat acreage is less than our previous designation (1,933 acres) (782 hectares (ha)), which included large blocks of adjacent Category I saline wetlands. These large blocks of Category I saline wetlands would need to be restored to provide habitat for the Salt Creek tiger beetle.

(23) *Comment:* A commenter stated that the method used by the Service of determining critical habitat acreage based on an “acres needed” mathematical model is not biologically defensible, risks extinction of the subspecies, and is arbitrary and capricious. Determining that amount of habitat available at the time of a survey that is sufficient to sustain the population assumes that the population is evenly distributed and all the primary constituent elements are available within those 35 acres to support a population over the long term. There is no information that demonstrates that these assumptions were met or considered.

Our Response: Our designation of critical habitat, based on the best scientific and

commercial data available, identifies habitat needed to support the survival and recovery of the Salt Creek tiger beetle. As is described in this final rule, our determination is based on an evaluation of habitat needs and mapping of primary constituent elements in occupied and unoccupied areas. We determined that the 35 occupied acres are insufficient to support the conservation of the Salt Creek tiger beetle. The purpose of the mathematical calculation is to inform our decision on the amount of critical habitat that is needed to ensure the conservation and recovery of the Salt Creek tiger beetle. These calculations help confirm that the 1,110 designated acres fall within the range of acres determined to be needed for recovery of the subspecies. (Also see our response to comment 8).

(24) *Comment:* A commenter pointed out the high degree of variation between the use of mark/recapture counts and visual counts to determine Salt Creek tiger beetle population size and lack of confidence that should be placed on visual counts; the commenter recommended use of mark/recapture counts on a regular basis in conjunction with visual counts of the Salt Creek tiger beetle. The commenter pointed out that the acreage of critical habitat needed should be based on the habitat needs and presence of PCEs and not on the amount of land occupied that was measured in one survey year.

Our Response: We acknowledge the commenter's concerns about the limitations of mark/recapture studies and recognize the implication that the type of survey has in our designation of critical habitat. However, a review of the data shows that mark/recapture studies were conducted on a small population that may have experienced immigration and emigration and, thus, may not have met the assumptions inherent to the use of mark/recapture methods. We determined that visual surveys provided the best available

scientific information because they were based on consistent survey methods done under similar intensity, and were done at the same time on an annual basis since 1991 by the University of Nebraska at Lincoln.

(25) *Comment:* Commenters stated that there is no scientific support for the assertion that 500 individuals in a population is viable given that the designation of 500 individuals is based on survey data from 1991 through 2011, when the number of individuals and populations were in decline. Thus, use of 500 individuals is based on an estimate taken not at the time of stability, but during a time of decline. While current scientific estimates are not available for what population size may be required by the Salt Creek tiger beetle, the commenter recommended that the Service should alternatively designate critical habitat that supports the recovery of larger population sizes to err on the side of the subspecies.

Our Response: See our response to Comment (8), above.

(26) *Comment:* A commenter pointed out that the Salt Creek tiger beetle is facing extinction in the near future and suggested that instead of three populations left that only two are left (and one is nonviable—Upper Little Salt Creek) and that these two populations appear to be a single population given synchrony in annual population numbers between Little Salt Creek at Arbor Lake and Lower Little Salt Creek.

Our Response: We have modified the text in this rule to show that the Upper Little Salt Creek population may not be viable. We are designating additional acres adjacent to the currently occupied area on Upper Little Salt Creek in the hopes of expanding the population to viable levels. However, we believe that the Little Salt Creek-Arbor Lake and Lower Little Salt Creek populations are discrete. Little, if any,

population emmigration and immigration likely occurs between these two populations because of the lack of habitat between them and because the distance between them far exceeds the dispersal capability of the Salt Creek tiger beetle. However, these populations are likely influenced by similar abiotic events, which have similar effect on population numbers over time. Populations will continue to be monitored on an annual basis to track status and trends over time.

(27) Comment: A commenter recommended the use of water as a PCE for the designation of critical habitat for the Salt Creek tiger beetle given the requirements of adults to have it available during mating and ovipositing.

Our Response: We agree that water is an important aspect of Salt Creek tiger beetle recovery in terms of providing moist soils for thermoregulation and suitable sites for larval habitat. As such, we identified surface water and groundwater as physical features for the Salt Creek tiger beetle in our proposed rule and this final rule for the designation of critical habitat. While we did not include groundwater itself as a PCE, groundwater contributes, in part, to the formation of the more specific habitat elements used by the Salt Creek tiger beetle, such as saline barrens and seeps found within saline wetland habitat. These more specific aspects of the species habitat are what we considered as the PCEs on which our critical habitat designation is based. Also see our response to Comment 5.

(28) Comment: One commenter stated that the proposed rule did not consider the importance of peripheral populations in achieving population stability in addition to the source populations as it did in the Service's advanced concept paper from 2005. The commenter recommended the inclusion of peripheral populations in our proposed revised

designation.

Our Response: We recognize that the presence of additional populations is important to the conservation of the Salt Creek tiger beetle. For this reason, we included the Haines Branch and Oak Creek Units as additions to the Rock and Little Salt Creek Units as part of this designation. We are hopeful that the subspecies can be reestablished in these areas in the future through reintroductions.

(29) *Comment:* A commenter inquired as to the basis for how the Oak Creek Unit was determined to be critical habitat for the Salt Creek tiger beetle.

Our Response: Our analysis of critical habitat was based on the availability of PCEs for the Salt Creek tiger beetle. A large salt flat located at the Oak Creek Unit was determined to have suitable habitat based on the presence of salt flats and saline seeps within the adjacent right of way along Interstate 80. The presence of exposed salts indicates that water is evaporating from the surface, supporting our assertion that the site has appropriate hydrology to support the Salt Creek tiger beetle. Additionally, a Salt Creek tiger beetle survey done in 1992 identified suitable habitat at the Oak Creek Unit. Although this survey is dated, there has been no activity in the area that would result in the modification of saline soils or hydrology such that suitable habitat would no longer be present at the Oak Creek Unit.

(30) *Comment:* Two commenters expressed concern that the proposed designation of critical habitat for the Salt Creek tiger beetle could affect current and future operations at the Lincoln Airport. The commenters suggested that any changes to airport operations, such as modifications to flight patterns, changes to aircraft operating parameters, or restrictions on maintenance and construction, could result in

administrative and implementation costs to the airport that are not addressed in the economic analysis.

Our Response: We do not anticipate any restrictions or modifications to airport operations or other activities occurring on Lincoln Airport lands. The lands we are designating are not used for aircraft operations but are considered a noise buffer for the airport. The types of activities known to occur within the area of the critical habitat designation include agriculture, grazing, and other forms of routine land management.

Activities occurring within the area of the critical habitat designation at the airport are unlikely to require a permit from a Federal agency. The Federal Aviation Administration (FAA) may initiate section 7 consultation prior to issuing future grant funding for the operation or maintenance of the airport. However, we do not anticipate requesting any restrictions or modifications to airport operations or the use of alternative flight paths because the airport itself is nearly 0.25-mile away from the critical habitat area, thus, far exceeding the dispersal distance of the subspecies. Further, we have no information to indicate that flight activities would have an effect on the Salt Creek tiger beetle or its critical habitat.

(31) *Comment:* Two commenters suggested that the proposed designation of critical habitat for the Salt Creek tiger beetle could affect the ability of the Lincoln Airport to secure grants from the FAA's Airport Improvement Program. In particular, the commenters expressed concern that the designation of critical habitat could lead to violations of grant assurances for safe airport operation if the designation leads to the implementation of conservation measures, such as restrictions on mowing; this could increase the presence of wildlife on the airfield or the likelihood of wildlife/aircraft

strikes. The commenters also expressed concern that the designation of critical habitat could lead to violations of grant assurances for financial self-sufficiency if the designation leads to restrictions on agricultural or grazing activity on airport lands. Violations of grant assurances could jeopardize the airport's ability to secure future Federal funding.

Our Response: The types of activities known to occur within the portion of the Lincoln Airport that is included within the critical habitat designation include agriculture, grazing, and routine land management activities. As described above, critical habitat is unlikely to result in changes to these activities.

(32) *Comment:* One comment suggested that we failed to fulfill our responsibility to communicate and coordinate with stakeholders by not communicating with the Lincoln Airport Authority as part of the economic analysis.

Our Response: The contractor conducting the economic analysis attempted to contact the Lincoln Airport Authority via email on December 10, 2013, and in subsequent phone calls. Because the contractor was unable to reach the Lincoln Airport Authority, the economic analysis references information provided by the Lincoln/Lancaster County Planning Department.

Summary of Changes from Proposed Rule

We have made changes to this final rule based on the information we received in comments regarding the origins of the salinity in Salt Creek tiger beetle habitat, viability of the Upper Little Salt Creek population, and landowner and acreage information. The following is a summary of our changes:

- Text in the *Habitat* and “Surface Water” sections now states that the source of salinity in Salt Creek tiger beetle habitat originates from the Pennsylvanian and/or Permian formations, and that the actual salt source is in north-central Kansas.
- Acreage and ownership percentages and land ownership descriptions were verified and corrected for the Oak Creek Unit in Table 2.
- Text was modified to clarify that the Upper Little Salt Creek population may not be viable in the Final Critical Habitat designation section of this Rule, Little Salt Creek Unit description.

Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

- (1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features
 - (a) Essential to the conservation of the species, and
 - (b) Which may require special management considerations or protection; and
- (2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of

critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical or biological features within an area, we focus on the principal biological or physical constituent elements (primary constituent elements such as roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type) that are essential to the conservation of the species. Primary constituent elements are those specific elements of the physical or biological features that provide for a species' life-history processes and are essential to the conservation of the species.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. For example, an area currently occupied by the species but that was not occupied at the time of listing may be essential to the conservation of the species and may be included in the critical habitat designation. We designate critical habitat in areas

outside the geographical area occupied by a species only when a designation limited to its range would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, other unpublished materials, or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include

all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to insure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Physical or Biological Features

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the (sub)species at the time of listing to designate as critical habitat, we consider the physical or biological features essential to the conservation of the (sub)species and which may

require special management considerations or protection. These include, but are not limited to:

- (1) Space for individual and population growth and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, or rearing (or development) of offspring; and
- (5) Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.

We derive the specific physical or biological features essential for the Salt Creek tiger beetle from studies of this subspecies' habitat, ecology, and life history as described in the **Critical Habitat** section of the proposed rule to designate critical habitat published in the **Federal Register** on June 4, 2013 (78 FR 33282), and in the information presented below. Additional information can be found in the final listing rule published in the **Federal Register** on October 6, 2005 (70 FR 58335). We have determined that the Salt Creek tiger beetle requires the following physical or biological features:

Space for Individual and Population Growth and for Normal Behavior

Individual Spatial Needs—The Salt Creek tiger beetle requires areas associated with saline seeps along stream banks and salt flats with the appropriate soil moisture and salinity levels and that are largely barren and nonvegetated. During the subspecies'

nearly 2-year larval stage, its spatial requirements are small, but very specific in terms of soil texture, moisture, and chemical composition (Allgeier et al. 2004, pp. 5–6; Allgeier 2005, p. 64; Brosius 2010, p. 20; Harms 2012a, pers. comm.). At this stage, the subspecies is a sedentary predator that positions itself at the top of its burrow to catch prey that passes nearby. Tiger beetle larvae do not move more than an inch or so from where eggs are originally deposited by the female (Brosius 2010, p. 64).

The adult stage of the Salt Creek tiger beetle lasts a few weeks in May, June, and July (Carter 1989, pp. 8 and 17). Adults have greater spatial requirements in order to accommodate foraging needs and egg-laying. We do not have information regarding historic dispersal distances for the subspecies. However, adults are strong fliers (Carter 1989, p. 9); therefore, it is likely they could disperse some distance if suitable habitat was available. A recent study documented adults dispersing up to 1,506 feet (ft) (459 meters(m)), with a mean dispersal distance of 137 ft (42 m), and most individuals dispersed less than 82 ft (25 m) (Allgeier 2005, p. 50). Longer dispersal movements almost certainly occur (Allgeier 2005, p. 51).

A female will lay up to 50 eggs during her brief adult season, each in a separate burrow (Rabadinanth 2010, p. 14). We do not have subspecies-specific information regarding the typical distance between burrows in the wild. However, tiger beetles using burrows in close proximity to one another may succumb to intraspecific and interspecific competition (Brosius 2010, p. 27). Efforts to breed the subspecies in captivity attempted to keep burrows in terrariums at least 1 inch (25 millimeter) apart; at this distance,

incidences of burrow collapse due to proximity to another burrow were documented (Allgeier 2005, pp. 121–122).

Population Spatial Needs—We do not have subspecies-specific information regarding a minimum viable population size for the Salt Creek tiger beetle or the amount of habitat needed to sustain a viable population. However, we have preliminarily determined that 500–1,000 adults is a reasonable estimate of a minimum viable population for the subspecies based on recovery plans for two other species of tiger beetles in the same genus (*Cicindela*). These plans consider a minimum viable population size to be at least 500–1,000 adults (Hill and Knisley 1993, p. 23; Hill and Knisley 1994, p. 31). The authors base this estimate on available literature and on preliminary observations of population stability at several sites, but acknowledge that there is little information available regarding the amount of habitat necessary to support a population of this size.

The Salt Creek tiger beetle is historically known from six populations (70 FR 58336, October 6, 2005); four from Little Salt Creek, one from Rock Creek, and one from Oak Creek (i.e., Capitol Beach). Half of these populations are now extirpated. Our recovery goal for the subspecies is to re-establish six populations, each with a size of 500 individuals or more. Little Salt Creek contains saline wetland and stream habitats currently occupied by the remaining populations of the subspecies. Rock and Oak Creeks also contain saline wetland and stream habitats although the subspecies has disappeared from those areas. One of the populations at Little Salt Creek (Upper Little Salt Creek

South population) was extirpated, leaving the remaining three populations. The two additional populations on Rock and Oak Creeks existed prior to the mid-1990s (70 FR 58336, October 6, 2005). Visual surveys of adults at the three remaining populations on Little Salt Creek over the past 10 years have ranged from 153 to 745 individuals (Harms 2009, p. 3). The Service determined that 38 ac (15 ha) of scattered barren salt flats and saline stream edges remain in the Little Salt Creek watershed, with approximately 35 ac (14 ha) currently occupied by the Salt Creek tiger beetle (70 FR 58342, October 6, 2005; George and Harms 2013, pers. comm.).

In the absence of specific data on how much space is required to maintain viable populations of Salt Creek tiger beetles, we derived an estimate of the amount of habitat needed to support six viable populations as follows. The minimum population of Salt Creek tiger beetles counted over the past 10 years was 153 adult beetles in 2005, from three populations. We consider a minimum of 500 adult beetles necessary to maintain a single viable population. The small population of 153 beetles occupied approximately 35 ac (14 ha) of habitat. We estimate that 3.3 times as much habitat would be required to support a minimum of 500 beetles; therefore approximately 116 ac (47 ha) are required to support a single viable population, and approximately 696 ac (282 ha) would be required to support 6 viable populations. This estimate is very conservative from the standpoint that 500 individuals was used as a minimum viable population size. If the upper number in the range of 500–1,000 adults to support a single viable population is used, similar calculations would conclude that approximately 1,368 ac (554 ha) are required to support six viable populations of the subspecies. Therefore, based upon the best available

information, it is reasonable to assume that 696–1,368 ac (282–554 ha) are needed to maintain the subspecies' viability. Therefore, we designed our revised critical habitat units to provide sufficient habitat to ensure the subspecies' recovery.

Summary—Based upon the best available information, we conclude that recovery of the Salt Creek tiger beetle would require at least six populations, with each population containing at least 500–1,000 adults of the subspecies. We estimate that at least 696–1,368 ac (282–554 ha) would be required to maintain these populations. Given the nature of insect populations, which are cyclic and subject to local extirpations, the subspecies must be sufficiently abundant and in a geographic configuration that allows them to repopulate areas following local extirpations when suitable habitat conditions return. Salt Creek tiger beetles require nonvegetated areas associated with stream banks, mid-channel islands, and salt flats to meet life-history requirements as core habitat, as well as adjacent habitat to facilitate dispersal and protect core habitat. We identify these spatial characteristics as a necessary physical feature for this subspecies.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

Food—The Salt Creek tiger beetle is a predatory insect. Larvae are sedentary predators that capture small prey passing over or near their burrows on the soil surface. Adults are very quick and agile, and use this ability to actively hunt a wide variety of flying and terrestrial invertebrates (Allgeier 2005, pp. 1–2, 5). Insect prey may be supported by the limited open habitat in close proximity to the burrows or by the adjacent

vegetated habitat. Typical prey items include insects belonging to the orders Coleoptera (beetles), Orthoptera (grasshoppers and crickets), Hemiptera (true bugs), Hymenoptera (ants, bees, and wasps), Odonata (dragonflies), Diptera (flies), and Lepidoptera (moths and butterflies) (Allgeier 2005, p. 5). Ants appear to be the most commonly observed prey of adult tiger beetles (Allgeier 2005, p. 5). Larvae are more easily affected by a limited food supply than adults because they almost never leave their burrows and must wait for prey (Ratcliffe and Spomer 2002, unpaginated).

Surface Water—The Salt Creek tiger beetle prefers very moist soils for egg-laying and during its larval stage, with mean soil moisture of 47.6 percent (Allgeier 2005, p. 72). This high moisture percentage likely aids in the subspecies' ability to tolerate heat (Allgeier 2005, p. 75) and keeps the soil malleable during burrow construction and maintenance (Harms 2012b, pers comm.). Adults of the subspecies spend significantly more time on damp surfaces and in shallow water than other tiger beetles (Ratcliffe and Spomer 2002, unpaginated; Brosius 2010, p. 70). This close association with seeps and adjacent shallow pools may allow adults to forage at times when high temperatures limit foraging by other saline-adapted tiger beetles. However, this association may also explain some of the subspecies' vulnerability to extinction—beyond the loss of saline wetlands in general, the limited seeps and pools in the remaining habitat may represent a further limitation regarding habitat (Brosius 2010, p. 74). Channelization along Salt Creek has increased its velocity, which in turn has resulted in deep cuts in the lower reaches of its tributaries. This change has caused these tributary streams to function like drainage ditches, lowering adjacent water table levels and drying many of the saline

wetlands that once provided suitable habitat for the subspecies (Farrar and Gersib 1991, p. 29; Murphy 1992, p. 12). Additionally, saline seeps located along Little Salt Creek have become over-covered following bank sloughing that was facilitated by channel entrenchment. Seeps are currently the only locations that provide suitable larval habitat.

Groundwater—Nebraska’s eastern saline wetlands are fed by groundwater aquifer discharge originating from Pennsylvanian and/or Permian formations with the actual salt source located in north-central Kansas. Urban expansion associated with the City of Lincoln is placing increasing demands on the aquifer (Gosselin et al. 2001, p. 99). The official soil series description for the “Salmo” soil series notes that the water table is near the surface in the spring and at depths of 2–4 ft (0.6–1.2 m) in the fall (USDA 2009). Harvey *et al.* (2007, p. 740) monitored groundwater levels and groundwater salinity at Rock Creek and Little Salt Creek from 2000 through 2002. They found that groundwater did not reach the soil surface and was present in the upper few yards (meters) of the soil column only during the spring when groundwater levels were at their highest due to winter snowmelt and spring rainstorms. They also noted that the depth of groundwater was related to the proximity of the stream, such that groundwater was at a lower depth near a stream than far away from it. They also noted that the area was under slight drought conditions during the study period. The increased depth to groundwater in this region is likely due to a combination of factors including drought, channelization along Salt Creek, and water depletions for urban and agricultural uses. If groundwater levels continue to decline, saline features of the wetlands could gradually change to freshwater, or wetlands could dry. Either of these scenarios could result in extirpation of the Salt

Creek tiger beetle from affected wetlands and could ultimately lead to extinction of the subspecies.

Saline Soils—Soils in the eastern saline wetlands of Nebraska typically contain chloride or sulfate salts and have a pH from 7–8.5 (Allgeier 2005, p. 17). Salt Creek tiger beetles prefer soils that are slightly saline, with an optimal electroconductivity of 2,504 milliSiemens per meter (mS/m) (Allgeier 2005, p. 75). However, salinities as low as 1,656 mS/m have been measured at survey sites (Rabadinanth 2010, p. 19). Soil salinity may serve as a means of partitioning habitat between the 12 species of tiger beetles in the genus *Cicindela* that use the saline wetlands of Nebraska (Allgeier et al. 2004, pp. 5–6; Allgeier 2005, p. 65; Brosius 2010, p. 13).

The “Salmo” soil series is found at all known occurrences for the subspecies (Allgeier 2005, p. 42). This soil type is formed on saline flood plains, and its characteristics typically include: (1) A texture of silt loam or silty-clay loam, (2) 0–2 percent slope, (3) somewhat poorly drained or poorly drained soils, and (4) 0–3 feet to the water table (Gersib and Steinauer 1991, p. 41; Gilbert and Stutheit 1994, p. 4; USDA 2009, pp. 1–3). The “Saltillo” soil series is found in adjacent Saunders County and has soil characteristics very similar to the “Salmo” soil series (USDA 2006, pp. 1–4). Consequently we believe that this soil type may also be able to provide suitable salinity levels and capacity to hold sufficient soil moisture for the subspecies.

Light—Salt Creek tiger beetles have only been observed laying eggs at night

(Allgeier et al. 2004, p. 5). Light pollution from urban areas likely disrupts nocturnal behavior by attracting beetles towards the light and out of their normal habitats (Allgeier et al. 2003, p. 8). In both field and laboratory studies, attraction to light from different types of lamps varied, in decreasing order, from blacklight, mercury vapor, fluorescent, incandescent, and sodium vapor, with blacklight being the most favored by the subspecies (Allgeier 2005, pp. 89–95). The disruption in behavior caused by lights could affect egg-laying activity of females, if it attracts females into unsuitable habitat.

Summary—Based upon the best available information, we conclude that the Salt Creek tiger beetle requires abundant available insect prey (supported by both the immediate core habitat and adjacent habitat), moist saline soils, and minimal light pollution. We identify these characteristics as necessary physical or biological features for the subspecies.

Cover or Shelter

Burrows—Salt Creek tiger beetle larvae are closely associated with their burrows, which provide cover and shelter for approximately 2 years. Larvae are sedentary predators and position themselves at the top of their burrows. When prey passes nearby, a larva lunges out of its burrow, clutches the prey in its mandibles, and pulls the prey down into the burrow to feed. Once a larva obtains enough food, it plugs its burrow and digs a pupation chamber, emerging as an adult in early summer of its second year (Ratcliffe and Spomer 2002, unpaginated; Allgeier 2005, p. 2). The subspecies is a visual

predator, requiring open habitat to locate prey (Ratcliffe and Spomer 2002, unpaginated). Consequently, a clear line of sight is important. Habitat that becomes covered with vegetation no longer provides suitable larval habitat (Allgeier 2005, p. 78). Burrow habitat can also be impacted from disturbances such as trampling (Spomer and Higley 1993, p. 397), which causes soil compaction and damages the fragile crust of salt that is evident on the soil surface. After the adult emerges from the pupa, it remains in the burrow chamber while its outer skeleton hardens (Ratcliffe and Spomer 2002, unpaginated). For the remainder of its brief adult stage, burrows are no longer used.

Summary—Based upon the best available information, we conclude that the Salt Creek tiger beetle requires a suitable burrow in moist, saline, sparsely vegetated soils for its larval stage. We identify this characteristic as a necessary physical feature for the subspecies.

Sites for Breeding, Reproduction, or Development of Offspring

Annual visual surveys have been conducted since 1991, when six populations were known. Each of the three populations of Salt Creek tiger beetle currently known is associated with Category 1 wetlands along Little Salt Creek including moist saline soils and seeps which can be located at saline wetlands and streams. Three additional populations occurred in the mid-1990s on Little Salt Creek, Oak Creek, and Rock Creek, but these have been extirpated since 1998. No records of the subspecies are known for other tributaries of Salt Creek. However, the subspecies may have been abundant

historically, based on numerous museum specimens collected from the Oak Creek area (locally referred to as Capitol Beach (Carter 1989, p. 17; Allgeier et al. 2003, p. 1)). The Oak Creek (Capitol Beach) population was severely impacted following construction of the Interstate-80 corridor and other urban development (Farrar and Gersib 1991, pp. 24–25), and finally disappeared in 1998. Little or no suitable habitat remains along Oak Creek because it has been channelized and has become somewhat entrenched. However, numerous saline seeps and a large salt flat are located southwest of Oak Creek in its former floodplain. Little Salt Creek and Rock Creek still contain numerous saline wetlands and are the focus of efforts to protect remaining saline wetlands (Farrar and Gersib 1991, p. 40). Saline seeps are known to occur at the Haines Branch Creek. Few regular surveys for the Salt Creek tiger beetle have been done in these areas; however, suitable habitat occurs there, and more habitat could be potentially restored to aid in the recovery of the Salt Creek tiger beetle (USFWS 2005, p. 18). Given the presence of suitable habitat for a subspecies with very narrow habitat preferences with historical records nearby, we can infer that the subspecies was likely present there in the past.

The Salt Creek tiger beetle has very specific habitat requirements for foraging, egg-laying, and larval development. Requirements regarding water, soil salinity, and exposed habitat are described in the previous sections.

Summary—Based upon the best available information, we conclude that the Salt Creek tiger beetle requires a core habitat of moist saline soils with minimal vegetative cover for foraging, egg-laying, and larval development. Adjacent, more vegetative

habitat is used for shade to cool adults (Harms 2013, pers. comm.), protecting core habitat, and supporting a diverse source of prey for adults and larval Salt Creek tiger beetles. Approximately 90 percent of all remaining wetlands suitable for Salt Creek tiger beetles occur in the Little Salt Creek and Rock Creek watersheds, but saline seeps and wetlands also occur at Oak and Haines Branch Creeks. We identify barren salt flats and saline seeps along streams and within suitable wetlands as a necessary physical feature for the subspecies.

Primary Constituent Elements for the Salt Creek Tiger Beetle

Under the Act and its implementing regulations, we are required to identify the physical or biological features essential to the conservation of the Salt Creek tiger beetle in areas occupied at the time of listing, focusing on the features' primary constituent elements. Primary constituent elements are those specific elements of the physical or biological features that provide for a (sub)species' life-history processes and are essential to the conservation of the (sub)species.

Based on our current knowledge of the physical or biological features and habitat characteristics required to sustain the (sub)species' life-history processes, we determine that the primary constituent elements specific to the Salt Creek tiger beetle are saline barrens and seeps found within saline wetland habitat in Little Salt, Rock, Oak and Haines Branch Creeks. For our evaluation, we determined that two habitat types within suitable wetlands are required by the Salt Creek tiger beetle:

- Exposed mudflats associated with saline wetlands or the exposed banks and

islands of streams and seeps that contain adequate soil moisture and soil salinity are essential core habitats. These habitats support egg-laying and foraging requirements. The “Salmo” soil series is the only soil type that currently supports occupied habitat; however, “Saltillo” is the other soil series that has adequate soil moisture and salinity and can also provide suitable habitat.

- Vegetated wetlands adjacent to core habitats that provide shade for subspecies thermoregulation, support a source of prey for adults and larval forms of Salt Creek tiger beetles, and protect core habitats.

With this final designation of critical habitat, we intend to identify the physical or biological features essential to the conservation of the subspecies, through the identification of the features’ primary constituent elements sufficient to support the life-history processes of the subspecies.

Special Management Considerations or Protections

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features that are essential to the conservation of the species and which may require special management considerations or protection. A detailed discussion of threats to the Salt Creek tiger beetle and its habitat can be found in the October 6, 2005, final rule to list the subspecies (70 FR 58335).

The primary threats impacting the physical and biological features essential to the conservation of the Salt Creek tiger beetle are described in detail in the final rule to list the subspecies published on October 6, 2005 (70 FR 58335). These threats may require special management considerations or protection within the critical habitat and include, but are not limited to, urban development (e.g., commercial and residential development, road construction, associated light pollution, and stream channelization) and agricultural development (e.g., over-grazing and cultivation). These threats are exacerbated by having only three populations on one stream (Little Salt Creek) with extremely low numbers and a highly restricted range making this subspecies particularly susceptible to extinction in the foreseeable future.

The features essential to the conservation of the Salt Creek tiger beetle (exposed, moist, saline areas associated with stream banks, mid-channel islands, and mudflats) may require special management considerations or protection to reduce threats. For example, a loss of moist, open habitat necessary for larval foraging, thermoregulation, and other life-history activities resulted in the extinction of another endemic tiger beetle—the Sacramento Valley tiger beetle (*Cicindela hirticollis abrupta*) (Knisley and Fenster 2005, p. 457). This was the first tiger beetle known to be extirpated. Actions that could ameliorate threats include, but are not limited to:

- (1) Increased protection of existing habitat through actions such as land acquisition and limiting access;
- (2) Restoration of potential habitat within saline wetlands and streams through exposure of saline seeps, removal of sediment layers to expose saline soils and seeps, and

use of wells to pump saline water over saline soils by Federal, State, and local interested parties;

(3) Establishment of multiple populations in the Rock, Oak, and Haines Branch Creeks through captive rearing and translocation of laboratory-reared larvae originating from wild populations;

(4) Protection of habitat adjacent to existing and new populations to provide dispersal corridors, support prey populations, and protect wetland functions; and

(5) Avoidance of activities such as groundwater depletions, new channelization projects, increased surface water runoff, and residential or road development that could alter soil moisture levels, salinity, open habitat, or low light levels required by the subspecies.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat requirements of the species and identify occupied areas at the time of listing that contain the features essential to the conservation of the species. If, after identifying areas occupied at the time of listing, we determine that those areas are inadequate to ensure conservation of the species, in accordance with the Act and our implementing regulations at 50 CFR 424.12(e) we then consider whether designating additional areas—outside those occupied at the time of listing—are essential for the conservation of the species.

We are designating critical habitat in areas within the geographical area occupied by the subspecies at the time of listing in 2005 (Little Salt Creek) under the first prong of the Act's definition of critical habitat. We also are designating specific areas outside the geographical area occupied by the subspecies at the time of listing that were documented to be occupied as recently as the mid-1990s, or are presumed to have been occupied in the past given the availability of suitable saline habitat, but which are presently unoccupied (Rock, Oak, and Haines Branch Creeks), under the second prong of the Act's definition of critical habitat. We have determined that such areas are essential for the conservation of the subspecies as they will spread the risk of subspecies extinction over multiple stream systems. Important sources of supporting data include the final rule for listing the subspecies (70 FR 58335, October 6, 2005), the recovery outline (USFWS 2009), available literature, and information provided by the University of Nebraska at Lincoln and the Commission (citations noted herein).

We are including all currently occupied habitat in our designation of critical habitat because any further loss of occupied habitat would increase the Salt Creek tiger beetle's susceptibility to extinction. As previously noted, the subspecies currently occupies approximately 35 ac (14 ha) of saline wetland and streams in three small populations along approximately 7 mi (11 km) of Little Salt Creek. The three existing populations are referred to as Upper Little Salt Creek–North, Little Salt Creek–Arbor Lake, and Little Salt Creek–Roper.

We are also including unoccupied saline wetlands, specifically saline salt flats

along Little Salt Creek that are interspersed among these three populations. These barren salt flats are essential to the conservation of the subspecies because they provide larval habitat, protect existing populations, provide dispersal corridors between populations, support prey populations, and provide potential habitat for new populations.

Lastly, we are including unoccupied barren salt flats and saline streams along Rock, Oak, and Haines Branch Creeks that were either occupied by the subspecies until 1998 (i.e., Rock and Oak Creeks) or have suitable habitat for the Salt Creek tiger beetle, but were surveyed infrequently (Haines Branch). We have determined that these areas (Little Salt, Rock, Oak, and Haines Branch Creeks) are essential to the conservation of the subspecies because they provide necessary redundancy in the event of an environmental catastrophe associated with Little Salt Creek—the only watershed that currently supports the subspecies. All of these areas are tributaries to Salt Creek.

We recommend that at least one viable population of Salt Creek tiger beetles be established in each of the three unoccupied units of critical habitat, recognizing the uncertainty as to which areas will successfully support reintroduced populations. However, so little appropriate habitat remains in one of these units (Haines Branch) that it is below the number of acres that we estimated would be necessary to support a population of 500 adults. With habitat restoration, we believe that the Haines Branch Unit would be capable of supporting a viable population of Salt Creek tiger beetles.

These populations, in addition to the three existing populations at Little Salt

Creek, would result in six populations, with at least 500 adults in each population, but with three populations in Little Salt Creek. This is the number of populations documented in the mid-1990s, and the minimum number needed for subspecies recovery; however, at that time, none of these populations were large enough to maintain the subspecies' viability, and three of the populations were later extirpated. As the populations expand to viable numbers, we anticipate that they will be within the maximum documented dispersal range of the subspecies and may eventually constitute one metapopulation that has spatially separated populations with some interaction between those populations.

We delineated the critical habitat unit boundaries for the Salt Creek tiger beetle using the following steps:

(1) We used Geographic Information System (GIS) coverages initially generated by Gilbert and Stutheit (1994, entire) to categorize saline wetlands in the Salt Creek watershed of Lancaster and Saunders Counties, Nebraska.

(2) We delineated critical habitat within the areas of Little Salt, Rock, Oak, and Haines Branch Creeks that (a) are documented to support the subspecies currently or to have supported it in the recent past (until 1998), or (b) that provide potential suitable habitat for the subspecies that could sustain a viable population.

(3) We delineated all of the barren salt flats in the four creeks with adjacent suitable saline wetlands.

(4) In order to include surrounding vegetative areas that provide essential resources and support functions to the subspecies, we delineated areas on segments of the

four creeks that extended 137 ft (the average known dispersal distance for the subspecies) on either side of the stream course. We used 137 ft because it is the average distance that the Salt Creek tiger beetle can move to meet life-history requisites, which can be satisfied within the stream segment and adjacent saline barrens and seeps in the floodplain area. We concluded that this distance would provide the subspecies with sufficient prey resources.

Some other areas within the likely historical range of the Salt Creek tiger beetle were considered in this revised designation, but ultimately are not included. We do not designate suitable saline wetlands along Middle Creek as critical habitat because the habitat there has been eliminated due to commercial and residential developments, road construction, and stream channelization, and is probably not restorable. Similarly, we do not designate areas on tributaries to Salt Creek near the Cities of Roca and Hickman, Nebraska, because agricultural development has somewhat limited the ability of these areas to be restored for the benefit of the Salt Creek tiger beetle. We also do not designate areas of Salt Creek downstream of Lincoln, Nebraska, because channel entrenchment has resulted in the loss of saline seep and saline wetland habitats there. We also do not include some remaining areas of saline wetlands in Upper Salt Creek because they are outside of the average dispersal distance of 137 feet for the subspecies.

This revision to the critical habitat designation for Salt Creek tiger beetle decreases the previous designation of 1,933 acres by 823 acres, but it increases the number of unoccupied units from one to three. This change extends critical habitat to

two additional stream corridors not previously included in critical habitat that could support populations of the subspecies in the future, thereby reducing the risk of extinction. We have also revised the PCEs on which this revision was based to make them clearer and easier for the public to understand. However, these revised PCEs are based on the same biological concepts about the needs of the Salt Creek tiger beetle that were used in the previous critical habitat designation.

Since the time of our previous critical habitat designation, we have begun the process of recovery planning, and have preliminarily determined that at least six populations of 500–1,000 beetles within suitable habitat across multiple stream corridors would be necessary to recover the subspecies. Therefore, we are designating an amount of critical habitat to allow for that recovery to occur. We considered other possible critical habitat configurations for this designation, including larger and smaller designations and different numbers of units. In this final revised designation, we have targeted areas that are better able to support the subspecies. This designation includes saline seeps where the subspecies has actually been found along Rock, Little Salt, Oak, and Haines Branch Creeks. Additionally, a 137-foot (42 m) dispersal distance was extended outward on either side of these creeks to provide the Salt Creek tiger beetle with access to a vegetative mosaic around the salt flats located in the floodplain. The use of the 137 foot (42 m) dispersal distance outward from the creeks is the primary reason why the critical habitat acreage is less than our previous designation (1,933 acres) (782 ha), which included large blocks of adjacent Category I saline wetlands. These Category I saline wetlands would need to be restored to provide habitat for the Salt Creek tiger beetle. In addition, this revised designation better provides for conservation by including

additional unoccupied habitat that is suitable for the species so that we can establish additional populations needed to improve the subspecies' redundancy and resiliency, two important factors in reducing extinction risk. We have conclude that this designation of 1,110 acres in four units is the most biologically appropriate as it is based on habitat features that are used by Salt Creek tiger beetles, is consistent with the statutory definition of critical habitat, and will best provide for the recovery of the subspecies.

When determining critical habitat boundaries within this final rule, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features for the Salt Creek tiger beetle. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the rule and are not designated as critical habitat. Therefore, a Federal action involving these lands will not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

The critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document in the **Regulation Promulgation** section. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on

http://www.regulations.gov at Docket No. FWS–R6–ES–2013–0068, on our Internet site *http://www.fws.gov/mountain-prairie/species/invertebrates/saltcreektiger/*, and at the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT**, above).

We are designating as critical habitat lands that we have determined were occupied at the time of listing and contain sufficient physical or biological features to support life-history processes essential for the conservation of the subspecies, and lands outside of the geographical area occupied at the time of listing that we have determined are essential for the conservation of the Salt Creek tiger beetle.

We are designating four units based on sufficient elements of physical or biological features being present to support the Salt Creek tiger beetle life processes. Some units contain all of the identified elements of physical or biological features and support multiple life processes. Some units contain only some elements of the physical or biological features necessary to support the Salt Creek tiger beetle's particular use of that habitat. Designating units of critical habitat on Little Salt, Rock, Oak, and Haines Branch creeks provides redundancy in the event that adverse effects on one of these watersheds impact Salt Creek tiger beetles or their habitat.

Final Critical Habitat Designation

We are designating four units as critical habitat for the Salt Creek tiger beetle. The critical habitat areas described below constitute our best assessment at this time of

areas that meet the definition of critical habitat. The four units are: (1) Little Salt Creek—under the first prong of the Act’s definition of critical habitat and (2) Rock Creek, Oak Creek, and Haines Branch—under the second prong of the Act’s definition of critical habitat. Table 1 shows the occupancy status of these units.

TABLE 1. Occupancy of Salt Creek tiger beetle by designated critical habitat unit.

Unit	Occupied at Time of Listing?	Currently Occupied?
Little Salt Creek Unit	Yes	Yes
Rock Creek Unit	No	No
Oak Creek Unit	No	No
Haines Branch Unit	No	No

The approximate area and ownership of each critical habitat unit is shown in

Table 2.

TABLE 2. Designated critical habitat units for Salt Creek tiger beetle (Area estimates reflect all land within critical habitat unit boundaries.).

Critical Habitat Unit	Land Ownership by Type	Estimated Quantity of Critical Habitat	Percent of Critical Habitat Unit
Little Salt Creek Unit	City of Lincoln	40 ac (16 ha)	14
	Lower Platte South Natural Resources District	19 ac (8 ha)	7
	Nebraska Game & Parks Commission	41 ac (17 ha)	14
	The Nature Conservancy	29 ac (12 ha)	10
	Pheasants Forever	11 ac (4 ha)	4
	Private*	144 ac (58 ha)	51
	Subtotal	284 ac (115 ha)	
Rock Creek Unit	Nebraska Game & Parks Commission	152 ac (62 ha)	29
	Private*	374 ac (152 ha)	71
	Subtotal	526 ac (213 ha)	
Oak Creek Unit	Nebraska Department of Roads	30 ac (12 ha)	14
	City of Lincoln	178 ac (72 ha)	86
	Subtotal	208 ac (84 ha)	
Haines Branch	BNSF Railway	7 ac (3 ha)	8
	City of Lincoln/State of Nebraska	45 ac (18 ha)	49

Unit	Private	40 ac (16 ha)	43
	Subtotal	92 ac (37 ha)	
Total	City of Lincoln	263 ac (106 ha)	24
	Lower Platte South Natural Resources District	19 ac (8 ha)	1.7
	Nebraska Game & Parks Commission	193 ac (78 ha)	17.4
	Nebraska Department of Roads	30 ac (12 ha)	2.7
	BNSF Railway	7 ac (3ac)	0.6
	The Nature Conservancy	29 ac (12 ha)	2.6
	Pheasants Forever	11 ac (4 ha)	1.0
	Private*	558 ac (226 ha)	50.0
	Total	1,110 ac (449 ha)	

* Several private tracts are protected by easements

We present a brief description of each unit and reasons why it meets the definition of critical habitat for Salt Creek tiger beetle below.

Unit 1: Little Salt Creek Unit

This unit consists of 284 ac (115 ha) of barren salt flats and three stream segments on Little Salt Creek in Lancaster County from near its junction with Salt Creek to approximately 7 mi (11 km) upstream. It includes the three existing populations of Salt Creek tiger beetles (Upper Little Salt Creek–North, Arbor Lake, and Little Salt Creek–Roper) present at the time of listing, and an additional site with an extirpated population (Upper Little Salt Creek–South). The Upper Little Salt Creek population is not considered viable given low populations numbers known from this area. This unit contains the physical or biological features essential to the Salt Creek tiger beetle.

Approximately 50 percent of the unit is either owned by entities that will protect

or restore saline wetland habitat (see Table 2) or is part of an easement that protects the saline wetland habitat in perpetuity. This portion of the unit is largely protected from future urban development (e.g., commercial and residential development, road construction, and stream channelization) and future agricultural development (e.g., overgrazing and cultivation) by the landowners' or easement holders' participation in the Implementation Plan for the Conservation of Nebraska's Eastern Saline Wetlands and their membership in the Saline Wetlands Conservation Partnership (SWCP). At least two tracts (owned by the City of Lincoln) have been restored (Arbor Lake and Frank Shoemaker Marsh) (Malmstrom 2011 and 2012, entire) and other areas are in the process of being restored or are managed to conserve saline wetlands. However, special management is needed, because without continued special management, historical impacts from development will continue to adversely affect much of the habitat. The remaining 50 percent of the Little Salt Creek Unit that is not currently receiving special management through protection and restoration of saline wetland habitat remains vulnerable to both historical and ongoing impacts from development. The lower reaches of Little Salt Creek are in or near the City of Lincoln and, consequently, are most vulnerable to impacts related to urban development; upper stream reaches are more impacted by agricultural development.

Unit 2: Rock Creek Unit

The unit consists of 526 ac (213 ha) of barren salt flats and a stream segment of Rock Creek from approximately 2 mi (3 km) above its confluence with Salt Creek to

approximately 12 mi (19 km) upstream. Most of this stream reach is in Lancaster County, but the northernmost portion is in southern Saunders County. This unit was not occupied at the time of listing; however, one population was present there until 1998. This unit contains the physical or biological features essential to the Salt Creek tiger beetle. It is essential to the conservation of the subspecies because any population established on Rock Creek would provide redundancy, in the event of a natural or manmade disaster on Little Salt Creek.

Approximately 29 percent of the unit is either owned by an entity that will protect or restore saline wetland habitat (see Table 2) or is part of an easement that protects the saline wetland habitat in perpetuity. This portion of the unit is largely protected from future urban development (e.g., commercial and residential development, road construction, and stream channelization), but not future agricultural development (e.g., overgrazing and cultivation). Approximately 152 ac (61 ha) of barren salt flats and the stream segment are part of the Jack Sinn WMA (owned by Nebraska Game and Parks Commission) located in southern Saunders and northern Lancaster Counties. This tract has undergone several projects to restore saline wetlands. However, special management is needed, because without special management through habitat protection and restoration, historical impacts from development will continue to adversely affect much of the habitat. The 71 percent of the Rock Creek Unit that is not currently receiving special management through protection and restoration of saline wetland habitat remains vulnerable to both historical and ongoing impacts from development. This unit is further removed from Lincoln; therefore, it faces fewer threats from urban development (e.g.,

commercial and residential development, road construction, and stream channelization) and more threats from agricultural development (e.g., overgrazing and cultivation) than the Little Salt Creek Unit.

Unit 3: Oak Creek Unit

The unit consists of 208 ac (84 ha) of barren salt flats and a saline seep complex located within a historic floodplain of Oak Creek. The unit is located along Interstate 80 in the northwest part of Lincoln, near the Municipal airport in Lancaster County. This unit was not occupied at the time of listing; however, one population was present until 1998. This unit contains the physical or biological features essential to the Salt Creek tiger beetle and is essential to the conservation of the subspecies because any population established on Oak Creek would provide redundancy, in the event of a natural or manmade disaster on Little Salt Creek.

Approximately 86 percent of the unit is owned by the City of Lincoln and 14 percent by the Nebraska Department of Roads (see Table 2). This unit is largely protected from future urban development (e.g., commercial and residential development, road construction, and stream channelization) and future agricultural development (e.g., overgrazing and cultivation). Barren salt flats including the saline seep complex along Interstate 80 are part of this unit. This tract was once a part of a large saline wetland complex and is the type locality for the Salt Creek tiger beetle. However, a substantial amount of development has resulted in the loss of the once large saline wetland known

from the area and special management practices may be needed to restore hydrology and the saline flat and seep habitats once prevalent in the area. This unit is near the City of Lincoln; however, it faces fewer threats from urban development (e.g., commercial and residential development, road construction, and stream channelization) than the Little Salt Creek Unit given the limitations on development that can be done along the Interstate and within the boundaries of the Lincoln Municipal Airport.

Unit 4: Haines Branch Unit

The unit consists of 92 ac (37 ha) of barren salt flats and a 2.8-mile long Haines Branch stream segment. Haines Branch is located on the west side of Lincoln, near Pioneers Park in Lancaster County. This unit was not occupied at the time of listing, but suitable habitat in the form of saline seeps and wetlands are available for the Salt Creek tiger beetle. This unit contains the physical or biological features essential to the Salt Creek tiger beetle and is essential to the conservation of the subspecies because any population established on Haines Branch Creek would provide redundancy, in the event of a natural or human-caused disaster on Little Salt Creek.

The entire unit is owned by private entities (see Table 2). This unit is not protected from future urban development (e.g., commercial and residential development, road construction, and stream channelization) or future agricultural development (e.g., overgrazing and cultivation). Special management is needed to restore the hydrology and saline flat and seep habitats for the subspecies.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our regulatory definition of “destruction or adverse modification” (50 CFR 402.02) (see *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F. 3d 1059 (9th Cir. 2004) and *Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 434 (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of section 7 consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

- (1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or
- (2) A biological opinion for Federal actions that may affect and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse

modification of critical habitat. We define “reasonable and prudent alternatives” (at 50 CFR 402.02) as alternative actions identified during consultation that:

- (1) Can be implemented in a manner consistent with the intended purpose of the action,
- (2) Can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction,
- (3) Are economically and technologically feasible, and
- (4) Would, in the Director’s opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the ongoing action (or the agency’s discretionary involvement or control is authorized by law). Consequently, Federal agencies sometimes may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical

habitat.

Application of the “Adverse Modification” Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that alter the physical or biological features to an extent that appreciably reduces the conservation value of critical habitat for the Salt Creek tiger beetle. As discussed above, the role of critical habitat is to support life-history needs of the species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the Salt Creek tiger beetle. These activities include, but are not limited to:

(1) Actions that would alter soil moisture or salinity. Such activities could include, but are not limited to, development within or adjacent to critical habitat such as

installation of tile drains in agricultural lands, construction of storm drains in urban areas, road construction, or further development of residential or commercial areas. These activities could decrease soil moisture levels (in the case of tile drains) or increase soil moisture and decrease salinity levels through increased runoff of fresh surface water (in the case of storm drains, road construction, and residential or commercial development). Any change to soil moisture or salinity levels could degrade or destroy habitat by altering habitat characteristics beyond the narrow range of soil moisture and salinity required by the subspecies. A secondary effect of increased freshwater inputs that lessens soil salinity is the potential invasion of more freshwater-tolerant plants such as cattails (*Typha* spp.) and reed canary grass (*Phalaris arundinacea*) that eliminate the open habitat required by the subspecies (Harvey et al. 2007, p. 749).

(2) Actions that would increase the depth to the water table. Such activities could include, but are not limited to, stream channelization or bank armoring in Little Salt Creek, Rock Creek, Haines Branch, and Oak Creek or adjacent portions of Salt Creek. These activities could result in a lowering of the water table within critical habitat that would compromise groundwater discharge functions necessary to maintain saline wetlands. A further loss of saline wetland habitat could impact our ability to conserve the Salt Creek tiger beetle.

(3) Actions that would cause trampling of open saline areas associated with stream banks, mid-channel islands, and mudflats. Such activities could include, but are not limited to, overgrazing by livestock within critical habitat. Trampling could result in

the destruction of larvae and larval burrows, leading to population declines.

(4) Actions that would increase nighttime levels of light. Such activities could include, but are not limited to, new construction of residential or commercial areas that includes nighttime lighting. Light pollution likely disrupts nocturnal behavior by attracting beetles away from their normal habitats (Allgeier et al. 2003, p. 8). Attraction to light from different types of lamps varies, in decreasing order, from blacklight, mercury vapor, fluorescent, incandescent, and sodium vapor, with blacklight being the most favored (Allgeier et al. 2004, p. 10). The disruption in behavior could affect nighttime egg-laying activity of females, if it attracts females into unsuitable habitat.

(5) Actions that would result in modification to the right-of-way located along Interstate 80 that could alter the hydrology supporting saline seeps and salt flats at Oak Creek. This could include earth disturbance and installation of drainage structures.

Exemptions

Application of Section 4(a)(3) of the Act

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that: “The Secretary shall not designate as critical habitat any lands or other geographic areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan [INRMP] prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.”

There are no Department of Defense lands with a completed INRMP within the final critical habitat designation.

Exclusions

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Under section 4(b)(2) of the Act, we may exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. In considering whether to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion

outweigh the benefits of inclusion, the Secretary may exercise her discretion to exclude the area only if such exclusion would not result in the extinction of the species.

Exclusions Based on Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum (IEM) and screening analysis which together with our narrative and interpretation of effects, was our draft economic analysis (DEA) of the proposed critical habitat designation (IEc 2014). The draft analysis, dated February 5, 2014, was made available for public review from March 13, 2014, through March 28, 2014 (79 FR 14206). The DEA addressed potential economic impacts of critical habitat designation for the Salt Creek tiger beetle. Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable economic impacts of this critical habitat designation. Information relevant to the probable economic impacts of critical habitat designation for the Salt Creek tiger beetle is summarized below and available in the screening analysis for the Salt Creek tiger beetle (IEc 2014), available at <http://www.regulations.gov>. We have not made any changes to the economic screening analysis since the proposed rule, but comments we received that pertain to the economic screening analysis are discussed in the **Summary of Comments and Recommendations** section of this rule.

The intent of the economic screening analysis is to quantify the economic impacts of all potential conservation efforts for the Salt Creek tiger beetle; some of these costs will likely be incurred regardless of whether we designate critical habitat (baseline). The economic impact of the final critical habitat designation is analyzed by comparing scenarios both “with critical habitat” and “without critical habitat.” The “without critical habitat” scenario represents the baseline for the analysis, considering protections already in place for the subspecies (e.g., under the Federal listing and other Federal, State, and local regulations). The baseline, therefore, represents the costs incurred regardless of whether critical habitat is designated. The “with critical habitat” scenario describes the incremental impacts associated specifically with the designation of critical habitat for the subspecies. The incremental conservation efforts and associated impacts are those not expected to occur absent the designation of critical habitat for the subspecies. In other words, the incremental costs are those attributable solely to the designation of critical habitat above and beyond the baseline costs; these are the costs we consider in the final designation of critical habitat. The analysis looks retrospectively at baseline impacts incurred since the subspecies was listed, and forecasts both baseline and incremental impacts likely to occur with the designation of critical habitat.

The economic screening analysis also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government agencies, private businesses, and individuals. The economic screening analysis measures lost economic efficiency associated with residential and commercial development and

public projects and activities, such as economic impacts on water management and transportation projects, small entities, and the energy industry. Decision-makers can use this information to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the economic screening analysis looks retrospectively at costs that have been incurred since 2005 (year of the subspecies' listing) (70 FR 58335), and considers those costs that may occur annually in the years following the designation of critical habitat. The economic screening analysis quantifies economic impacts of Salt Creek tiger beetle conservation efforts associated with the following categories of activity: (1) Agriculture and livestock grazing; (2) restoration and conservation; (3) residential and commercial development; (4) water management and supply; (5) transportation activities, including bridge construction; and (6) utility activities. The economic screening analysis considered each industry or category individually. Additionally, the economic screening analysis considered whether each of these activities have any Federal involvement. Critical habitat designation will not affect activities that do not have any Federal involvement; designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. In areas where the Salt Creek tiger beetle is present, Federal agencies already are required to consult with the Service under section 7 of the Act on activities they fund, permit, or implement that may affect the subspecies. Once this critical habitat designation takes effect (see **DATES**, above), consultations to avoid the destruction or adverse modification of critical habitat will be incorporated into the existing consultation process.

In occupied habitat (Little Salt Creek Unit), the economic screening analysis determined that the economic cost of implementing the critical habitat rule through section 7 of the Act will most likely be limited to additional administrative effort to consider adverse modification. This finding was based on the following factors:

- The presence of the subspecies already results in significant baseline protection under the Act.
- Project modifications requested by the Service to avoid jeopardy to the subspecies are also likely to avoid adverse modification of critical habitat. The designation of critical habitat is unlikely to generate recommendations for additional or different project modifications.
- Critical habitat is unlikely to increase the number of consultations occurring in occupied habitat as a result of the existing awareness by Federal agencies of the need to consult due to the listing of the subspecies.
- The designation also receives baseline protection from the presence of a State-listed endangered plant, saltwort (*Salicornia rubra*).

In unoccupied habitat (Rock Creek, Oak Creek, and Haines Branch Units), the economic screening analysis found that the designation would generate the need for section 7 consultation on projects or activities that may affect critical habitat. The administrative costs of these consultations, and costs of any project modifications resulting from these consultations, reflect incremental costs of the critical habitat rule. In particular, we may request project modifications, including erosion control and biological

monitoring for highway projects to avoid adverse modification in unoccupied critical habitat, and grazing restrictions for consultations related to potential conservation partnerships.

Based on the historical consultation rate and forecasts of projects and activities identified by land managers, the economic screening analysis found that the number of future consultations is likely to be fewer than 12 in a single year, all of which are expected to be conducted informally. The additional administrative cost of addressing adverse modification during informal section 7 consultation is approximately \$2,400 per consultation, and the full cost of a new informal consultation is approximately \$7,100 per consultation. Incremental project modification costs may include \$360,000 for highway projects in the Oak Creek Unit, and up to \$110,000 if grazing exclosures are implemented through conservation partnerships in the Rock Creek Unit. Incremental costs are likely to be greatest in the Oak Creek Unit and are driven by project modifications for highway construction activities. Total forecast incremental costs of section 7 consultations, including administrative and project modification costs, are likely to be less than \$540,000 in a given year. Thus, in summary, the incremental costs resulting from the critical habitat designation are unlikely to reach \$100 million in a given year based on the number of anticipated consultations and per-consultation administrative and project modification costs. Executive Order (EO) 12866, Regulatory Planning and Review, directs Agencies to assess the costs and benefits of regulatory actions and quantify those costs and benefits if that action may have an effect on the economy of \$100 million or more in any one year. Costs associated with this designation are not expected to exceed

this threshold, therefore a qualitative evaluation in accordance with EO 12866 was prepared for this action.

The designation of critical habitat is unlikely to trigger additional requirements under State or local regulations. This conclusion is based on the likelihood that activities in wetland areas will require Federal permits and, therefore, section 7 consultation. Additionally, the designation of critical habitat has the potential to convey other benefits to the public. Additional efforts to conserve the beetle are anticipated in unoccupied habitat. Project modifications may result in direct benefits to the subspecies (e.g., increased potential for recovery) as well as broader improvements to environmental quality in these areas. Due to existing data limitations, the economic screening analysis is unable to assess the likely magnitude of such benefits.

Our economic analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary is not exerting her discretion to exclude any areas from this designation of critical habitat for the Salt Creek tiger beetle based on economic impacts.

A copy of the IEM and screening analysis with supporting documents may be obtained by contacting the Nebraska Ecological Services Field Office (see **ADDRESSES**) or by downloading from the Internet at <http://www.regulations.gov>, or at <http://www.fws.gov/mountain-prairie/species/invertebrates/saltcreektiger/>.

Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense where a national security impact might exist. In preparing this final rule, we have determined that no lands within the designation of critical habitat for the Salt Creek tiger beetle are owned or managed by the Department of Defense or Department of Homeland Security, and, therefore, we anticipate no impact on national security. Consequently, the Secretary is not exerting her discretion to exclude any areas from this final designation based on impacts on national security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we also consider any other relevant impacts resulting from the designation of critical habitat. We consider a number of factors, including whether the landowners have developed any HCPs or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any tribal issues and consider the government-to-government relationship of the United States with tribal entities. We also consider any social impacts that might occur because of the designation.

In preparing this final rule, we have determined that there are currently no HCPs or other management plans for the Salt Creek tiger beetle, and the final designation does

not include any tribal lands or trust resources. However, there is an implementation plan for the conservation of Nebraska's remaining eastern saline wetlands (LaGrange *et al.* 2003, entire). Signatories to this plan include the Nebraska Game and Parks Commission, the City of Lincoln, the County of Lancaster, the Lower Platte South Natural Resources District, and The Nature Conservancy. This plan may protect and restore Salt Creek tiger beetle habitat to the same extent into the future. The goal of the plan is no net loss of saline wetlands and their associated functions, with long-term improvements in wetland functions through restoration of the hydrological system, prescribed wetland management, and watershed protection (LaGrange *et al.* 2003, p. 6). This plan led to formation of the Saline Wetland Conservation Partnership (SWCP), which has purchased nearly 1,200 ac (486 ha) of eastern saline wetlands and associated uplands, and acquired conservation easements on more than 2,000 ac (810 ha) of additional lands (Malmstrom 2011 and 2012, entire). Overall, approximately 29 percent of occupied and unoccupied critical habitat is protected through these acquisitions. We believe that activities implemented under the plan or under the SWCP will be supported by the designation of critical habitat. The benefits of exclusion of these areas would include the reduction in federal oversight that would otherwise be applied if an unoccupied critical habitat unit were designated as critical habitat. However, a critical habitat designation increases the opportunities for funding to do habitat restoration projects for the benefit of the Salt Creek tiger beetle and its saline wetland and stream habitats. Therefore, the benefits of including this area in critical habitat outweigh any benefits of excluding it. No areas are excluded from this designation based on other relevant impacts.

We anticipate no impact on tribal lands, partnerships, or HCPs from this critical habitat designation. Accordingly, the Secretary is not exercising her discretion to exclude any areas from this final designation based on other relevant impacts.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) will review all significant rules. The Office of Information and Regulatory Affairs has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 (5 U.S.C 801 *et seq.*), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations, such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in

annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts on these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule, as well as the types of project modifications that may result. In general, the term “significant economic impact” is meant to apply to a typical small business firm's business operations.

The Service’s current understanding of the requirements under the RFA, as amended, and following recent court decisions, is that Federal agencies are only required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself, and therefore, not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7 only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by this designation. There is no requirement under RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities are directly regulated by this rulemaking, the Service certifies that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities.

During the development of this final rule we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Based on this information, we affirm our certification that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. OMB has provided guidance for implementing this Executive Order that outlines nine outcomes that may constitute “a significant adverse effect” when compared to not taking the regulatory action under consideration.

The economic analysis finds that none of these criteria is relevant to this analysis. Thus, based on information in the economic analysis, energy-related impacts associated with Salt Creek tiger beetle conservation activities within critical habitat are not expected. As such, the designation of critical habitat is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following findings:

(1) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental mandate” includes a regulation that “would impose an enforceable duty upon State, local, or tribal governments” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or tribal governments “lack authority” to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and

Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.”

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule will significantly or uniquely affect small governments because most of the lands within the designated critical habitat do not occur within the jurisdiction of small governments. This rule will not produce a Federal mandate of \$100 million or greater in any year. Therefore, it is not a “significant regulatory action” under the Unfunded Mandates Reform Act. The designation of critical

habitat imposes no obligations on State or local governments. Consequently, we do not believe that the critical habitat designation would significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with Executive Order 12630 (“Government Actions and Interference with Constitutionally Protected Private Property rights”), we have analyzed the potential takings implications of designating critical habitat for the Salt Creek tiger beetle in a takings implications assessment. Based on the best available information, the takings implications assessment concludes that this designation of critical habitat for the Salt Creek tiger beetle does not pose significant takings implications.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this critical habitat designation with, appropriate State resource agencies in Nebraska. We received comments from the Nebraska Game and Parks Commission and the Nebraska Department of Roads and have addressed them in the **Summary of Comments and Recommendations** section of the

rule. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the subspecies are more clearly defined, and the physical and biological features of the habitat necessary to the conservation of the subspecies are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (because these local governments no longer have to wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the applicable standards set forth in sections 3(a) and 3(b)(2) of the Order.

We are designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the subspecies, the rule identifies the elements of physical or biological features essential to the conservation of the Salt Creek tiger beetle. The designated areas of critical habitat are presented on a map, and the rule provides several options for the interested public to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)). However, when the range of the species includes States within the Tenth Circuit, under the Tenth Circuit ruling in *Catron County Board of Commissioners v. U.S. Fish and Wildlife Service*, 75 F.3d 1429 (10th Cir. 1996), we undertake a NEPA analysis for critical habitat designation and notify the public of the availability of the draft environmental assessment for a proposal when it is finished. In the case of the Salt Creek tiger beetle, we prepared an environmental assessment for our 2010 final rule designating critical habitat for the subspecies, and made a finding of no significant impacts. Although the State of Nebraska is not part of the Tenth Circuit, and, therefore, NEPA analysis is not required, we undertook a NEPA analysis in this case since we conducted one previously for our 2010 final rule.

We performed the NEPA analysis, and a draft of the environmental assessment was made available for public comment on March 13, 2014 (79 FR 14206). The final environmental assessment has been completed and is available for review with the publication of this final rule. Our environmental assessment showed that there would be beneficial impacts for the Salt Creek tiger beetle through habitat redundancy and focused

conservation activities as well as increased awareness about critical habitat.

Conservation actions that benefit the Salt Creek tiger beetle would also benefit many other species of fish, wildlife, and plants found along Rock, Little Salt, Oak, and Haines Branch creeks. As such, we concluded that the designation of critical habitat for the Salt Creek tiger beetle does not constitute a major Federal action significant affecting the quality of the human and natural environment. Accordingly, on May 1, 2014, we issued a finding of no significant impact for our final designation of critical habitat for the Salt Creek tiger beetle.

You may obtain a copy of the final environmental assessment and finding of no significant impact online at <http://www.regulations.gov>, by mail from the Nebraska Ecological Services Field Office (see **ADDRESSES**), or by visiting our Web site at <http://www.fws.gov/mountain-prairie/species/invertebrates/saltcreektiger/>.

Government-to-Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities,

and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes. We determined that there are no tribal lands occupied by the Salt Creek tiger beetle at the time of listing that contain the physical or biological features essential to conservation of the subspecies, and no tribal lands unoccupied by the Salt Creek tiger beetle that are essential for the conservation of the subspecies.

References Cited

A complete list of all references cited is available on the Internet at <http://www.regulations.gov> and upon request from the Nebraska Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this rulemaking are the staff members of the Nebraska Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and

recordkeeping requirements, Transportation.

Regulation Promulgation

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.

2. In § 17.95, amend paragraph (i) by revising the entry for “Salt Creek Tiger Beetle (*Cicindela nevadica lincolniana*)” to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(i) *Insects.*

* * * * *

Salt Creek Tiger Beetle (*Cicindela nevadica lincolniana*)

(1) Critical habitat units are depicted for Lancaster and Saunders Counties, Nebraska, on the maps below.

(2) Within these areas, the primary constituent elements of the physical or biological features essential to the conservation of the Salt Creek tiger beetle consist of saline barrens and seeps found within saline wetland habitat in Little Salt, Rock, Oak and Haines Branch Creeks. For our evaluation, we determined that two habitat types within suitable wetlands are required by the Salt Creek tiger beetle:

(i) Exposed mudflats associated with saline wetlands or the exposed banks and islands of streams and seeps that contain adequate soil moisture and soil salinity are essential core habitats. These habitats support egg-laying and foraging requirements. The “Salmo” soil series is the only soil type that currently supports occupied habitat; however, “Saltillo” is the other soil series that has adequate soil moisture and salinity and can also provide suitable habitat.

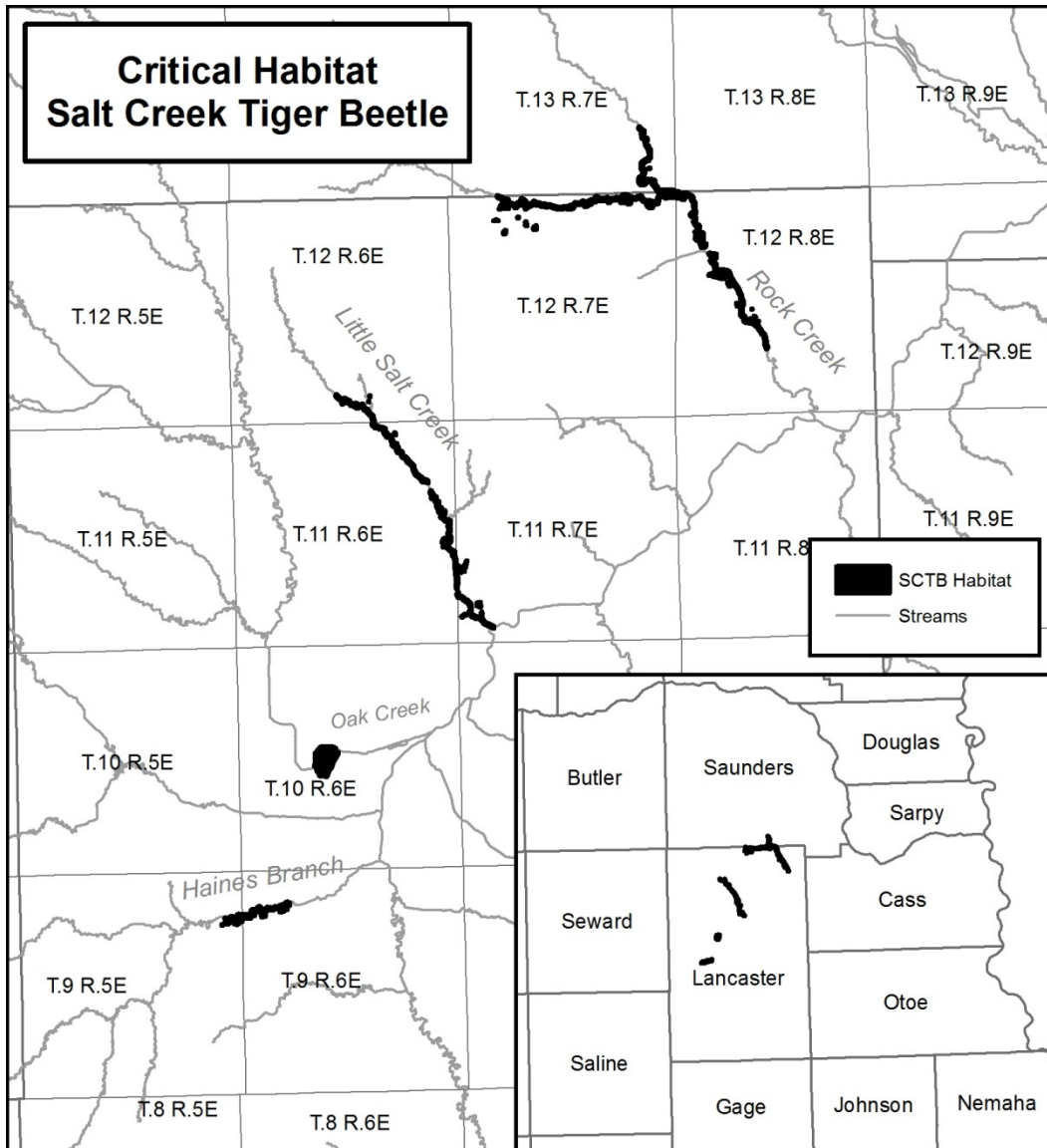
(ii) Vegetated wetlands adjacent to core habitats that provide shade for subspecies thermoregulation, support a source of prey for adults and larval forms of Salt Creek tiger beetles, and protect core habitats.

(3) Critical habitat does not include manmade structures (such as buildings,

aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on [**INSERT DATE 30 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION**].

(4) *Critical habitat map units.* Data layers defining map units were created using National Wetlands Inventory polygons, habitat categorization classes, and an image object analysis. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's Internet site at <http://www.fws.gov/mountain-prairie/species/invertebrates/saltcreektiger/>, at <http://www.regulations.gov> at Docket No. FWS-R6-ES-2013-0068, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Map showing critical habitat units for the Salt Creek tiger beetle follows:



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Dated: April 25, 2014
Michael Bean
Acting Principal Deputy Assistant Secretary for Fish and Wildlife
and Parks

Billing Code 4310-55-P

[FR Doc. 2014-10051 Filed 05/05/2014 at 8:45 am; Publication Date: 05/06/2014]